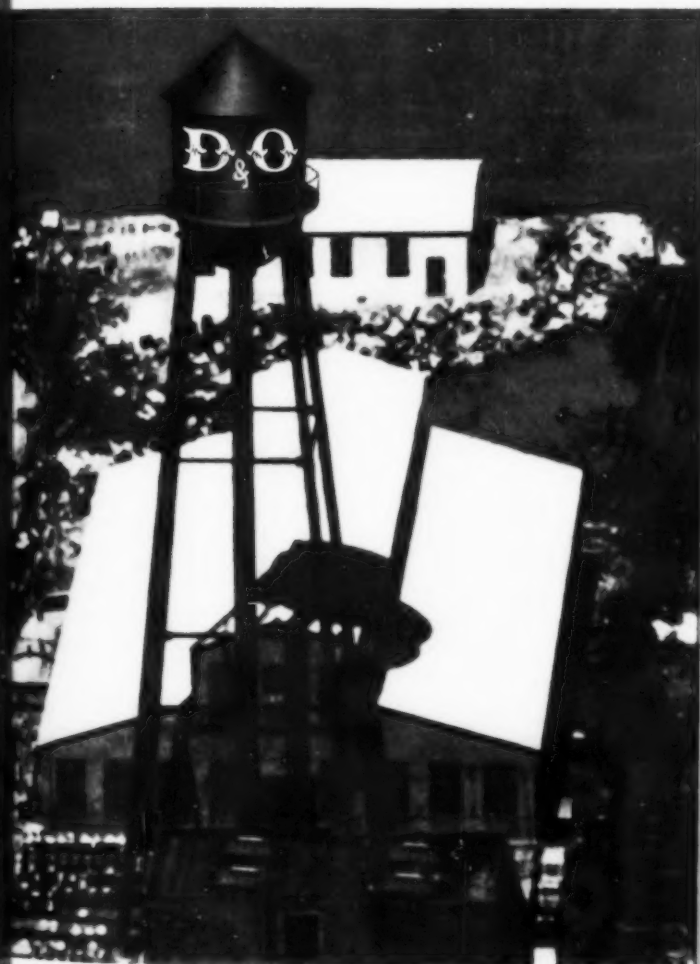


SOAP

SANITARY CHEMICALS

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February 1942

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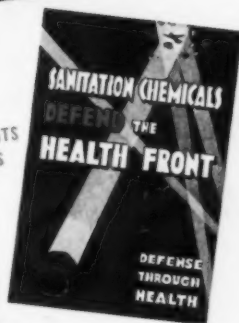
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SANITARY CHEMICALS

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**FEBRUARY
1942**

SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 71.



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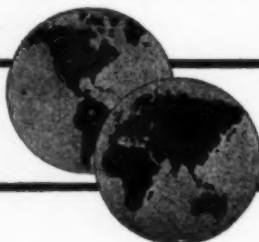
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Here and now is Hysan's New VICTORY DISINFECTANT... available in three phenol coefficients—5, 10 and 15—to check infections, noxious odors and work-stopping contagions at the source.

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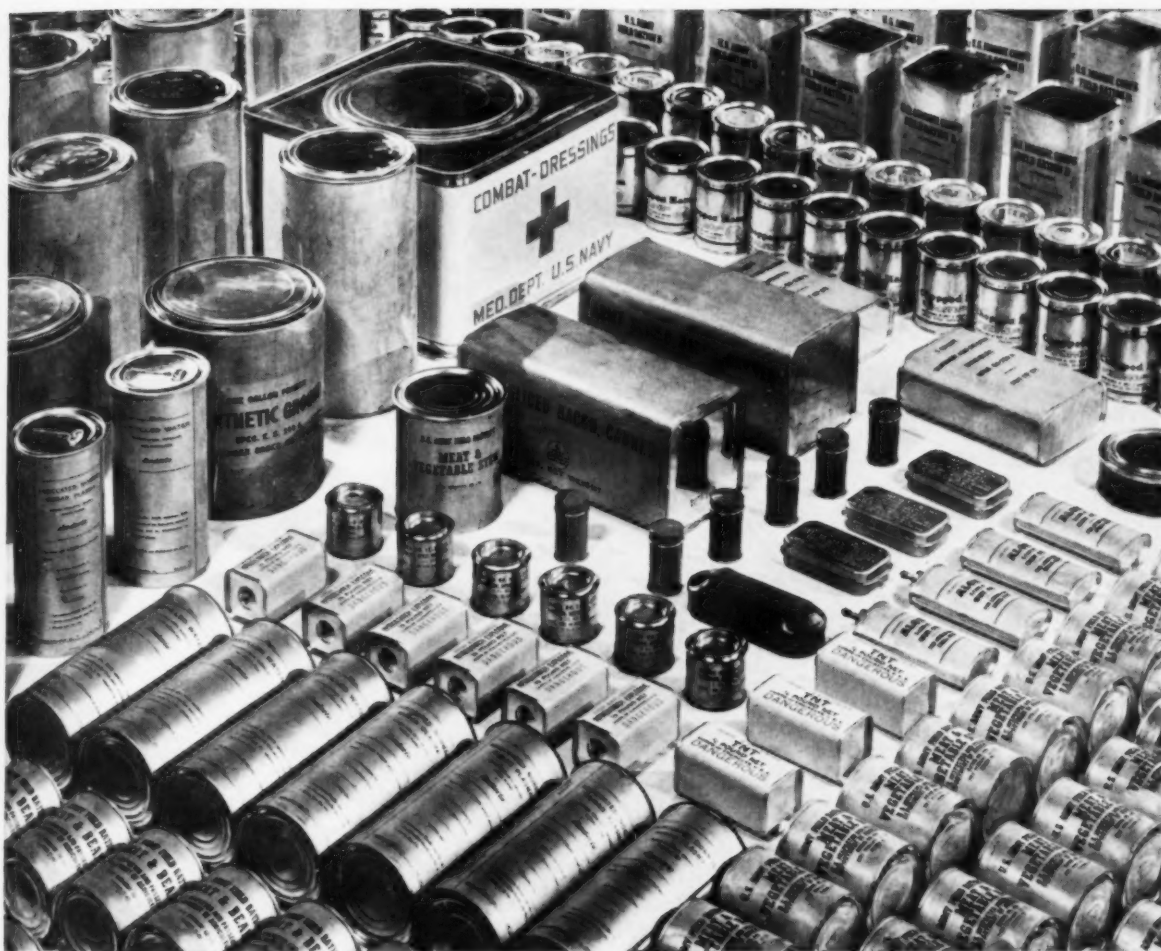
EVEN when oil of citronella was low in price and easy to obtain, JAVONELLA was a reliable favorite. A great many manufacturers preferred its finer, cleaner odor, its uniform quality and consistent economy. And now that Citronella is so high in price and difficult to get, JAVONELLA is more important to you than ever before.

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Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES, PERFUME AND FLAVOR OILS
BRANCHES IN PRINCIPAL CITIES



SOME "NON-SECRET" WEAPONS

THE AXIS WOULD LIKE TO HAVE

Study the Labels on the cans and packages in the picture above.

On some of them, you'll notice "Army Sliced Bacon, Canned . . . U. S. Marine Corps Field Ration D . . . U. S. Army Meat and Vegetable Hash . . . TNT Dangerous, Corps of Engineers."

There's a container for dried human blood in the picture, too. For transfusions in the field. Another to house a delicate motor on anti-aircraft guns.

And while you'll be interested to

know that these articles are some of the many defense items the containers for which are made by the can-making and packaging industries, their significance goes far beyond this simple fact.

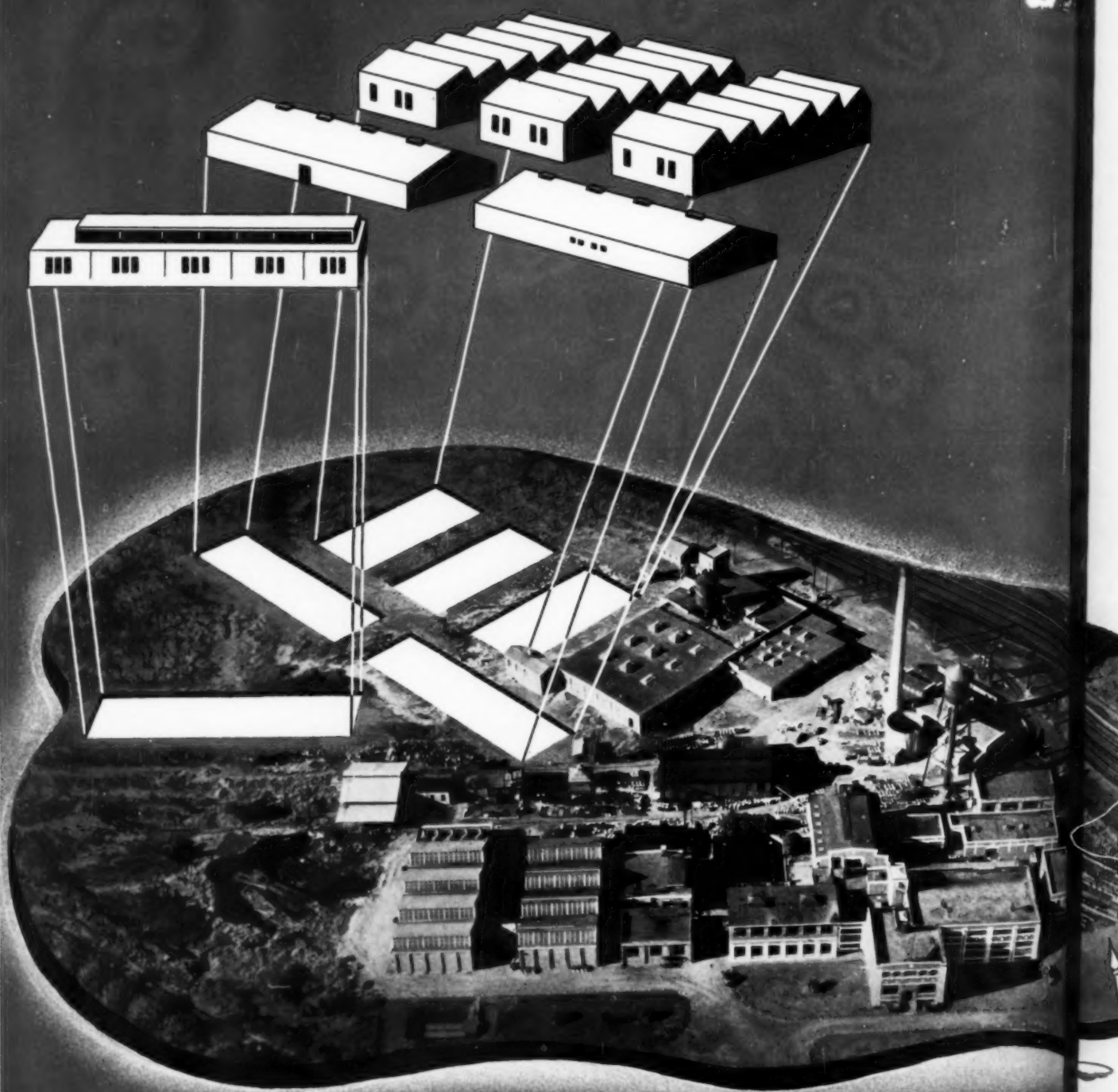
For they are weapons. "Non-secret" weapons, if you will. And every country has them. *But the Axis would like to have ours. Do you realize why?*

The industrial resources that produced these "non-secret" weapons are the largest in the world. The Axis needs those resources.

It needs the men . . . the machinery . . . the skill . . . the research that make the quality and the quantity of these weapons possible. It needs the energy of the free, unregimented economy which produced these weapons.

We Americans can congratulate ourselves that the Axis hasn't these resources . . . that we—not the Axis—have built the greatest packaging and can-making industries in the world . . . that we are now using the sinews of these industries to resist aggression. American Can Company, 230 Park Avenue, New York, N. Y.

A CHALLENGE



Shown here are the additional manufacturing facilities at our Delawanna, New Jersey plant. All of the new units indicated have been completed.

TO OUR SKILL AND INGENUITY!

Now that the uncertainties have been removed, there is but one goal ahead—VICTORY! Those of us on the Home Front have our jobs to do—to keep production up, morale high, and do our appointed tasks to the limit of our ability until the goal is reached!

The importance of our industry in contributing to morale and to efficiency at home is well known. Nevertheless—first things must come first! That imports of raw materials for our industry must be sacrificed is accepted in these times. That other basic materials needed for our wartime production will become unavailable for non-defense uses is to be expected.

This will be a challenge to our skill and ingenuity.

At Givaudan we will meet this challenge to the best of our ability. We have the facilities. A program of plant expansion, launched four years ago, has added materially to our capacity for the production of high quality aromatic materials. Our equipment is highly efficient and flexible; we will be able to make the most of materials that are available.

And we have the experience. Our staff is composed of men who, by training and intimate association with the needs of perfume, cosmetic, and related industries, are well qualified to undertake this new responsibility.

Within the necessary limitations of available raw materials, we will do our utmost to see that all needs are met.



GIVAUDAN-DELAWANNA, INC.

330 WEST 42ND STREET, NEW YORK, N. Y.

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The bug in the idea is **BUGS**

Joseph sold the idea of an ever-normal granary to Pharaoh 5000 years ago. It's still a good idea... except for insect infestation of the stored grain!

To safeguard the millions of bushels of corn and wheat now in storage against insect attack requires thousands of gallons of fumigants! One of the effective fumigants contains a mixture of carbon bisulphide and carbon tetrachloride . . . of which Westvaco is an important producer. These chemi-

cals are being made available in cooperation with the Department of Agriculture for the safeguarding of America's food supply.

Fumigants for foodstuffs—barium compounds for tracer bullets—magnesium oxides for refractories—chlorine and its derivatives—alkalis and phosphates—all of the increasing list of Warner Chemicals are playing an ever-increasing part in both defense and industrial production.



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Our first and only job now is to win the war. The effort of every American should be directed to that accomplishment. If van Ameringen-Haebler, Inc. can best serve this purpose by the continuation of our normal business, we shall do that to the best of our ability. If we find that we can serve our country better by devoting the facilities of our plants and laboratories to defense production we are ready and eager to do so as quickly as possible.

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WHERE**

THEY COUNT MOST

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INDUSTRIAL
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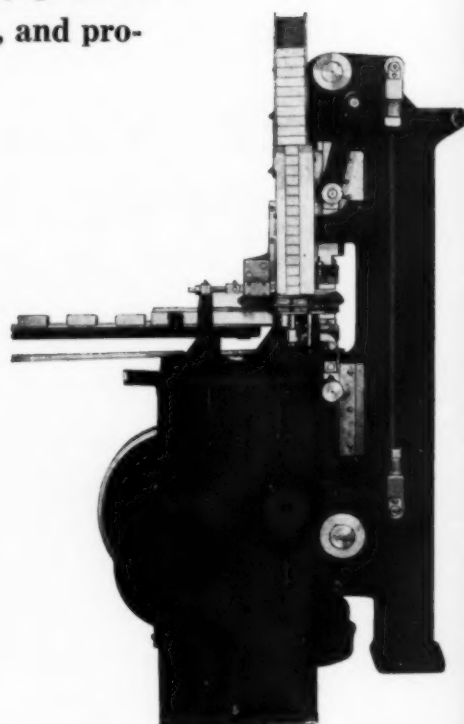
ECONOMY?

*Certainly—
But don't let it be too expensive*

Economy is a watchword of our war program. But don't let economy become false. Old, worn out, noisy presses ruin costly dies, rack the nerves of employees, and produce cracked, unsightly cakes that fall apart in use. They are mighty expensive economy. "Keeping the old press going" by continually replacing one worn part after another soon costs the price of a new press; yet you have but old press performance.

Greatest economy comes from efficiency. If your press is beyond repair, replace it with a new

JONES TOGGLE OPERATED PRESS



Type ET Toilet Soap Toggle Press

R. A. JONES & COMPANY, Inc.
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EDITOR

SEES IT

ANY threat to eliminate the manufacture of all types of soap where the glycerine is not recovered, is indeed a real threat to the potash soap industry. Although the manufacture of potash soaps represents only about three per cent of the total soap production of the country, it is a mighty important three per cent. In it are included U.S.P. soft soap and other medicinal soaps, dry cleaning soaps, and a number of soap specialties whose importance is far greater than the tonnage of their production. Glycerine recovery by this group is quite out of the question. To compel the manufacturers to switch over exclusively to fatty acids does not appear feasible. As far as we know, only a few potash soap units of larger companies are equipped with fat splitting facilities, while the ability of most smaller firms to buy fatty acids on the open market today appears to run right into a stone wall of reduced supply and high price.

Of the entire potash soap industry, perhaps a half-dozen might survive an edict banning the use of glycerides. The other several hundred, all small but of varying size and importance, would be faced with elimination. Knowing that all efforts are being put forward to push glycerine production to the absolute limit, we do, nevertheless, feel that it would be a serious mistake to hamstring this branch of the soap industry and cut off the many important items which it is today supplying to defense industries. It would be the part of better judgment to forego this small potential added glycerine output, and concentrate on making it up elsewhere, far better than robbing Peter to pay Paul within the mechanism of our defense set-up.

IN view of the present acute situation in coconut oil, we feel that its use in edible products should be discontinued now as a means of preserving remaining stocks for use in soap manufacture and as a step in augmenting glycerine supplies. Coconut oil is undoubtedly more essential in soap manufacture than in those types of margarine and shortening where it finds its widest use as a food. Not only do we believe that coconut oil can be replaced for these edible uses with less difficulty than by the soap manufacturer, but we also believe that the extra glycerine yield of coconut oil in the soap kettle today warrants a restriction of its use in foodstuffs. With no desire to interfere in the affairs of margarine and shortening manufacturers, we feel nevertheless that the present emergency calls for some such drastic action to preserve supplies for soap manufacture.



WHAT can we use in place of coconut oil? We are finding difficulty in obtaining this oil and would like you to give us the names of two or three good substitutes. This was the essence of an inquiry which came to us recently from a soap manufacturer in Colombia. From South America, the home of the babassu nut, came this inquiry! So strictly in accordance with the inquiry, we "gave him the names" of two good substitutes, babassu and palm kernel oils. Now, all he has to do is to locate supplies of these latter two and go right ahead just as though nothing had happened.

And this calls to mind that just about fifteen years ago, a rather seedy individual bothered us for weeks to get us to help him find somebody to finance a special piece of equipment for cracking and hulling babassu nuts. He pictured the babassu industry possibilities in Brazil as tremendous with the supply of nuts and oil unlimited. He pictured the oil as superior to coconut and in twenty years a complete replacement for other free-lathering oils in the soap kettles of the Western Hemisphere. We smiled indulgently and put him down as just another crack-pot who specialized in annoying editors, which is what all crack-pots have to do eventually when nobody else will listen to them. But now, we sort of wish that we had at least tried to find somebody to finance that babassu nut cracker. How welcome a nice big extra tonnage of babassu oil would be today!



AS part of the movement to save everything in behalf of our war effort, newspaper writers here and there about the country have taken up the cry to save soap. That this is faulty advice is quite obvious to those who are familiar with the situation. Far more sensible, it would be if these writers urged housewives to use soap lavishly even to the point of wasting it. But true to the tradition of most newspaper columnists, really to investigate the facts before sounding off would be just too much to expect. The cry to save everything is in the air, and like the hounds in a pack, they take up the cry to save soap without knowing too well just why they are doing it.

For every pound of soap produced, there is a proportionate production of glycerine. No soap, no glycerine! And the need today is to encourage maximum glycerine production in every reasonable and economic manner. Glycerine is a vital war material which we *must have* irrespective of cost.

Naturally, anything which will cut soap production, will do likewise with the glycerine output. And a shortage of glycerine now would seriously interfere with the production of irreplaceable war materials.

There is no shortage of soap and there is not likely to be a shortage. Ample oils and fats will undoubtedly be available, excluding perhaps coconut oil and other lauric acid oils, which will have to be replaced with other fats. Quick and free lathering soaps may not be as plentiful as they were, but there will be adequate supplies of other good soaps to take their place. As long as the soap industry bends every effort to attain a maximum glycerine output, enough soap will of necessity be produced to take care of all our normal needs.

To return to our original plaint against those who warn that soap will become scarce and that it should be conserved, — and the Consumer Division of the O.P.A. might also harken here, — we desire to brand any such counsel as bad advice and definitely against the best interests of our war efforts.



ESPECIALLY in the hard water districts of the country, the American public is due for quite a shock when it suddenly wakes up and finds that its soaps do not lather as heretofore. When soaps containing a sharply reduced content of coconut oil or no coconut at all finally get into the hands of the ultimate consumer, he or she should have known in advance just what to expect. In short, a brief educational campaign might pave the way. Possibly, the Consumer Division of the O.P.A. which has been so free with its warnings about a soap scarcity and the conservation of soap, might be of help here in telling the public what to expect in future soap lathering qualities, and why.

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r, 1942



Hand Cleaners

... sales increases
and formula changes
have resulted from
the defense program

DIRTY hands win wars—but dirty hands also need cleaning after the day's work is done. As the national victory program gathers momentum, the need for "mechanics" soap, grit hand soap, and other industrial cleaners for work-stained hands increases by leaps and bounds. Manufacturers of these types of products have already noticed a definite increase in business directly attributable to heightened wartime industrial activity, and they are anticipating even greater market gains as the war program gathers further momentum.

Of all the various classes of soaps, perhaps the most closely tied up with the defense effort are industrial hand cleaners. From one standpoint alone, that of incidence of industrial or occupational dermatitis, it is highly important that workers in defense industries use hand cleaners that are safe. It has been well

established that when certain chemicals are used for hand cleaning, the natural defenses of the skin against infection are weakened and dermatitis becomes a problem. For this reason, more and more Safety Engineers have begun to recognize the importance of hand cleaning in plant economy.

Opinions of Safety Engineers differ widely, however, as to the proper ingredients of a hand cleaner. Some of them specify that no vegetable oil soaps be used; others insist on a certain percentage of coconut oil in the soap formula. Some will not permit borax in the hand cleaners they pass for their plants; others look upon borax as a valuable ingredient. Still others have definite ideas about abrasives and emollient materials—and so it goes.

But while opinions may differ, it is apparent that there is an increasing recognition of the importance of

taking every possible precaution to keep dermatitis at a minimum.

Thus, a tendency has been noted over recent years for industrial employers to supply the hand cleaners used by their employees. This constitutes a definite trend. Until recently plant employees were expected to furnish their own hand cleaners. It was no concern of the management. But today many machine shops, and other industrial plants are buying hand soaps for their workers.

One advantage accomplished through the employer purchasing the hand cleaner used by workers is that the use and waste of materials such as gasoline, turpentine, kerosene and naphtha, for cleaning dirty hands is thereby greatly reduced. These and similar materials are used by employees, because they are easily available and free, instead of some product they have to buy. All these sol-

vent materials are more expensive to the employer than any industrial hand cleaner on the market. And they contribute to the increased incidence of dermatitis, both primary and secondary.

The market for industrial hand soaps has become larger and will become still larger as a result of the defense effort, but at the same time, as in every other field, new problems and difficulties have come out of the war. The principal problem is that of distribution, and this is tied up with the problem of packaging.

Hand cleaners of the paste type are among the few soap products that are normally packaged in cans. The problem involved is obvious. Cans of every type are in short supply. Yet what else can be used? Pasteboard or fibre board cartons will not stand up as containers for products with a high water content, while use of glass involves the danger of chipping and breakage. Moreover glass containers are heavier than cans, which makes them more expensive to ship—a definite problem where the unit value is low,—and products packed in glass are subject to a higher freight classification than those packaged in cans.

Manufacturers of industrial hand soaps of the dry or powdered types may also have difficulty with packages where fibre board containers have been used, because of a possible shortage of paper. This is not expected to be as severe, however, as shortages in metal containers.

In addition to distribution and packaging problems, makers of industrial hand cleaners are faced with shortages of certain of the raw materials commonly used in their manufacture. Shortages of trisodium phosphate, of tetrasodium pyrophosphate, of borax, may force manufacturers to change the formulas in which these chemicals appear. In the case of the phosphates, sellers are limiting their deliveries to normal requirements of regular customers. Certain grades of borax are short due to a recent strike which

tied up production of one of the large producers, and to the need for boric acid in certain defense industries.

All types of abrasives, however, are easily obtained. That is to say, no shortages exist among the abrasives which find application in industrial hand cleaners, although transportation shortages may result in slow deliveries. Of course Italian pumice is no longer available, but this has offered no particular problem since the Italian product is completely replaceable by American pumice. Domestic pumice has been found in actual experience to be equal in every respect to Italian pumice, and to be superior for some uses.

A comparison of an American pumice, mined at Grants, New Mexico, with an Italian pumice is given in the following table:

	American pulverized Per Cent	Italian select Per Cent
Silica.....	72.90	73.24
Alumina.....	11.28	10.61
Iron Oxide.....	.86	1.57
Titanium oxide...	.06	.10
Calcium oxide....	.80	1.10
Magnesium oxide..	.36	.40
Soda.....	3.64	3.03
Potash.....	4.38	5.58
Sulfuric anhydride..	.03	.05
Loss on ignition...	5.20	4.04

The two samples analyzed are substantially the same as far as chemical composition is concerned. Their physical properties are also almost identical. The lower percentage of iron oxide in the American pumice makes it more desirable for use in soap. It should be understood that the above analysis is not representative of all American pumice, however, for pumices from various sources are being marketed and naturally they vary in composition. Pumices from other parts of the country are said to run higher in free magnetic iron oxide.

A short time ago, deliveries of American pumice were from two weeks to a month behind schedule, but now deliveries are being made as soon as transportation can be effected, the result of a new producing plant being opened.

One of the largest American manufacturers of a grit hand soap in cake form employs American pumice as the abrasive, and it is used by numerous well known manufacturers of mechanics' hand soap in powdered and paste form. The grades normally used in mechanics' hand soaps are Nos. 1/2, 1 and 1 1/2, which contain the proper screen sizes to give effective abrasive action of the type required.

American pumice is not to be confused with volcanic ash, which has entirely different physical structure than pumice and gives less abrasive action. Before American pumice was developed, attempts were made from time to time to supplant imported pumice with volcanic ash which was referred to erroneously as "American pumice."

Volcanic ash, also called seismotite, is fairly widely used in industrial hand cleaners. No supply shortages of this material are anticipated. The other abrasives frequently used, silica, marble dust, wood flour, cornmeal and common salt, are also in good supply. Producers of industrial hand cleaners apparently have little to worry about as far as abrasives are concerned. A shortage of rolling stock, however, might produce a difficult situation in the transportation of cheap, bulky materials such as abrasives.

INDUSTRIAL hand cleaners of the paste type are, and have been for some time, more popular than the solid cake or powdered types. For one thing, they are the oldest type of abrasive hand cleaner and have established a reputation for themselves through several generations of mechanics and machine shop workers. One of the oldest brands of paste hand soaps is said to have originated as a non-commercial enterprise. A certain automobile salesman, so the story goes, back in the days when they were called horseless carriages, made up a compound for his own use in cleaning up after the frequent breakdowns on the road. He gave away so many jars of the

compound to his friends that quite a demand was built up. After some time it was decided to make the product commercially.

Paste type cleaners are convenient to use and rapid in action as they release the abrasive quickly. This is one reason for their popularity. At the same time they are prone to be wasted, as workers have a tendency to take more than is needed for a hand washing. Thus much of the cleaner goes down the sink. Also unless the cover of the can is replaced after every using, it is a common experience to find that the paste has dried out and hardened to a brittle crumbly mass. Another disadvantage of paste hand soaps is that there is no convenient way in which they can be dispensed.

Powdered hand soaps, on the other hand, are easily dispensed through use of a simple powder dispenser. The dispenser selected for the job should have moving parts constructed of abrasive-resisting metal, for naturally a dispenser of this type receives much rougher treatment than ordinary soap dispensers. The fact that they can be used in dispensers recommends them for use in large industrial plants where the furnishing of numerous cans of paste cleaners would be impractical. Some manufacturers of powdered industrial hand cleaners have advanced the theory that the powdered cleaners are more sanitary than the paste type because there is no possibility of transmission of disease via the product when they are used. The idea that a soap product could be considered a dangerous avenue of disease transmission cannot be credited, however, for it is probably the least blameworthy of all the materials handled in common by workers. Looking at it from a different point of view, paste soaps might easily be considered safer than powdered soaps since their consistency makes possible the inclusion of liquid emollient materials designed to protect the hands of the user.

The distribution of powdered type hand cleaners is a simpler propo-

sition as a larger unit size package can be used to advantage and fibre-board containers, which are commonly used for packaging, are more easily obtained than the cans required for pastes.

The third general type of industrial hand cleaners includes the cake hand soaps. A criticism which has been directed against the cake hand cleaners is that the abrasive is not released quickly enough, so that it requires more time and effort to remove stubborn dirt than with the paste or powdered types. Mechanics, industrial workers, machinists, etc., are interested in getting their hands clean with the least amount of trouble and thus go for the product which works most quickly and efficiently. Also, where the soap is bought by the individual rather than by the employer, (and this is still true in the majority of cases), and is kept in the worker's locker, cake soap is again at a disadvantage for there is no convenient way in which it may be kept from day to day. Paste soap, on the other hand, is easily stored away overnight in its can.

FROM the viewpoint of the safety engineer, the particular abrasive used in an industrial hand soap is an important consideration. Pumice is probably the most widely used abrasive material for products of this type. Yet, with its hardness in the neighborhood of 6 (on Moh's scale), it is considered too hard for use on the human skin by a number of authorities. This is a matter of opinion and there is much to be said on both sides of the fence. A certain amount of abrasive action is needed very definitely in an industrial hand soap, but how much abrasive action is needed and how it is obtained are matters which may be solved in a number of different ways. This is a matter of individual preference.

The price of pumice, unlike the prices of most materials, has remained static during the past year or so. Prices have been maintained even though the cost of production has gone up. And this has been true of

all the important abrasive materials employed in this class of products.

Marble dust and seismotite are softer in action than pumice and also less effective abrasives. They are both used extensively in industrial hand cleaners. Silica, or sand, is more widely used, principally because of its cheapness. There is no doubt that it will do an excellent job of removing dirt by attrition, but in the process it also removes some of the worker's skin. This makes it somewhat risky to use. Much harsher in action than pumice, silica is used primarily where cheapness is the main consideration.

Wood flour is also used as a cheap abrasive, sometimes in combination with another abrasive such as pumice. Its abrasive action is low, however, so much so that it is often considered merely a filler. Aside from the negative virtues of lack of the harsh features of the inorganic abrasives, it has little but cheapness to recommend it.

One material which combines good abrasive action without the objectionable features of the hard inorganic abrasives is cornmeal. This is used in one of the best known brands of paste hand soaps, and one which has been widely imitated, as to name, style of package, and even color.

Common salt, as a dissolving abrasive, is used in one of the newest powdered industrial hand cleaners. One of the selling points of this hand product is that it contains no insoluble abrasives and will not clog up drains and sinks.

Fillers used in compounding industrial hand cleaners cover a wide range of materials. Some of the materials which have been used as fillers are bentonite, starch, clays, talc, chalk, soapstone, whiting, crystalline calcspar, diatomaceous earth, sodium silicate. Other additive agents used for various reasons are: titanium dioxide, used to give the product a white color; lanolin for its effect on the skin; methyl cellulose, used as an emulsifying agent; petrolatum; gela-

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JAVA

CITRONELLA OIL

By Dr. Ernest Quenther

Fritzsche Brothers, Inc.

JAVA citronella oil is undoubtedly one of our most important essential oils. With a yearly average production of more than 2,000 tons, it surpasses the eucalyptus, peppermint and even the citrus oils. The great value of this oil lies in its unique chemical composition which makes it the starting material for manufacturing quite a number of very important aromatics such as geraniol, geraniol esters, citronellal, citronellol, citronellol esters, hydroxy-citronellal and synthetic menthols, all used widely in the perfume, soap, cosmetic, pharmaceutical and flavor industries. The oil as such finds application in many technical preparations like insecticides, sprays, polishes and so forth.

Citronella oil came into prominence rather slowly during the second half of the last century when it was produced almost exclusively in Ceylon. A previously published paper¹ gave a detailed account of Ceylon citronella oil. The following article, also based upon personal investigation in the country of origin, presents a study of Java citronella oil, its botany, history, production, chemistry and methods of analysis. The writer would like to take this opportunity to express sincere thanks to his friends in the Department of Economic Affairs in Batavia—Mr. G. Schimmel, Mr. G. F. Blokhuis, Mr. Th. Röell², and Dr. D. R. Koolhaas—who so cordially and generously assisted him during his travels through the interior of Java. No one could visit the Dutch East Indies without being deeply impressed by the

marvelous achievements of the Hollanders as colonizers of those fascinating islands.

There are two main types of commercial citronella oil today, the oil produced in Ceylon and that produced in Java. Until about 1900, the market depended almost exclusively on the Ceylon oil, but today the Java oil is of far greater importance. Because of its better quality and more suitable chemical constitution, Java citronella oil is employed as basic raw material in the manufacture of aromatic isolates and synthetic aromatics while the Ceylon oil serves mainly in soaps, sprays and technical preparations in general. There is really no reason why the Ceylon oil, still present in some long-established formulas, could not be replaced by the undoubtedly superior Java oil. The odor of the two types is similar but the Ceylon oil contains only 52 to 60 per cent total geraniol

(including 7 to 10 per cent citronellal), while a good Java oil shows at least 85 per cent total geraniol (including at least 35 per cent citronellal). Besides, the Ceylon oil is almost always adulterated by the addition of 5 to 7 per cent kerosene, whereas the Government Laboratories in Buitenzorg, Java, control the quality of Java oil so strictly before it is shipped that adulterated oils can no longer reach the oversea markets.

Thus, it is not surprising that export figures of the Ceylon oil average only 600 tons per year, while the Dutch East Indies export about 2000 tons, most of which is produced in Java.

Botany

THE family *Gramineae* comprises a number of valuable essential oil bearing grasses, for instance, lemongrass, palmarosa, gingergrass and citronella. *Andropogon Nardus*



L. subsp. genuinus Hack, the citronella or sereh grass, as it is called locally, seems to have at least two forms between which morphological differences cannot be found. These forms are:

1. *Andropogon Nardus Java* de Jong (*Cymbopogon Winterianus* Jowitt), the so-called *maha pangiri* from which the bulk of the Java and also a little of the Ceylon oil are distilled. The plants, recognizable by their broad leaves, require good soil and much care in growing and cultivating. They must be renewed after a few years because the clumps work themselves out of the ground. Young shoots growing from the axillary leaves of the mother plant form large clumps of grass with long leaves bending outward at a certain height until their ends touch the ground. The growing blades, about three to four feet high, would flower all year around if left in the natural state and not pruned, but regular cutting, as done on the plantations, prevents flowering. Very tall plants usually contain less essential oil than normal ones.

Maha pangiri grass gives a better yield and an oil of better quality than *lenabatu* grass. Most citronella plantings in Java consist of *maha pangiri* grass but there also exist some of the inferior *lenabatu* which is one reason for the occasional inferior lots of Java citronella oil.

2. *Andropogon Nardus Ceylon* de Jong (*Cymbopogon Nardus* Rendle, *lenabatu*), the so-called *lenabatu* from which most of the Ceylon and also a little of the Java oil are distilled.

The plants, growing higher than *maha pangiri*, can be recognized by their long and narrower leaves. The hardier *lenabatu* has a longer life span, grows on poorer soil and demands much less care, all factors which make this grass ideal for Ceylon's native growers. However, in regard to yield and quality of its oil, this grass is inferior to the *maha pangiri*.

The grass which now produces commercial Java citronella oil is not indigenous to Java. It was imported

from Ceylon around the year 1900 when quite a number of grasses originating from Ceylon were experimented with in and near Buitenzorg. The wild *mana* grass, *Cymbopogon confertiflorus* Stapf, which is said to be the mother plant of all commercial citronella grasses, does not occur in Java.

History

JAVA'S citronella oil industry dates back to about 1890 when Kaffer, during a hunting trip near Cheribon, found a primitive native still in which wild growing sereh grass was distilled. Interested in the possibilities of such an oil, Kaffer later experimented with raising the grass on his own fields. Although its origin is obscure, this grass was of such good quality that in 1890 a small planting was set out in the Buitenzorg Botanical Garden. Aside from Kaffer, there were other pioneers in this field, for instance, Treub, Van Romburgh, and Hockman, who initiated production of the grass in western Java. De Jong³ and later Hofstede⁴ contributed greatly to the development by their classic and extremely detailed studies and papers on Java citronella oil.

In 1899 citronella grass imported from Ceylon was planted in Buitenzorg, and Kaffer extended his own plantations not very far from Buitenzorg. At that time it was, of course, tremendously difficult to compete on the European market against the dominating Ceylon oil, but in 1900 Schimmel & Co. commented very favorably in their annual report upon a Java oil distilled by Van Romburgh from grass grown in the Botanical Garden of Buitenzorg. In 1902, Java possessed two citronella distilleries, one of them, "Odorata," owned by Kaffer at Tjitjoeroen and the other, "Tjikantjana," at Tjandjoer. Between 1900 and 1910 the European consumers began to realize that the Java oil, being superior in quality, deserved a higher price than the Ceylon oil; also, Europe's new and rapidly growing industry of aromatic isolates and synthetics could use the Java oil to far greater advantage

than the Ceylon oil. As a result, Java's citronella plantings expanded steadily, and in 1919 Java for the first time surpassed Ceylon in the production of citronella oil. The boom year of 1924 saw prices higher than fl. 7 per kilo, and from then on production increased rapidly until in 1926 Java produced twice as much as Ceylon. At the end of 1933, during the world-wide depression, prices fell to about fl. 1 per kilo, but even then expansion continued until about 1800 tons of oil were produced in 1934 when prices fell below fl. 0.80. This increase in production despite declining prices was a result of the even more depressed condition of all other agricultural enterprises which induced many small growers to turn to a still relatively remunerative product like citronella.

It might be well at this point to consider the effect which this enormous increase in production had on the quality of the oil. During the early years of Java's citronella industry, all oil was distilled under very similar conditions: identical plant material (consisting exclusively of *maha pangiri*), identical soil, altitude, apparatus and working methods. The few, large European owned and managed distilleries worked grass grown only on their own plantings. Freshly cut grass of best quality was distilled with direct steam of relatively high pressure and for only a short time. Therefore, the oils were quite uniform and the constants of Java citronella oil varied only between very narrow limits.

Then the narrow leafed, hardier and longer-lived *lenabatu* variety of grass was introduced from Ceylon, probably with the idea of raising it experimentally on some of the poorer soils of Java. It was hoped that this variety, although giving a lower yield and an inferior quality of oil, might nevertheless offer a solution to the problem of opening new terrains for planting. Unfortunately, however, during the years when citronella plantings were being vastly expanded and the demand for planting material was great, the inferior *lenabatu* was propagated along with the *maha*



pangiri. This, of course, brought about a lowering of the quality of the Java oil which previously had attained such a good reputation. It is not in the interest of Java to produce this type of oil, and therefore even today the growers must guard against drawing their young plants (*bibit*) from *lenabatu* fields.

The rapid expansion of citronella from 1910 to 1934 had still other consequences. Many Chinese and wealthier natives took up distillation in competition with the European producers. They had to purchase their plant material (*bibit*) from existing plantations which frequently supplied the worst cuttings. The plantations spread to different soils, to different altitudes and to

regions with different weather conditions. The small newcomers could not afford to erect large and modern steam distilleries; they used more primitive direct fire stills, often distilling grass purchased from native growers instead of grass grown on their own plantations. The idea was to obtain as much oil as possible from the grass without paying much attention to quality; and when prices finally fell to unprofitable levels, plantings were neglected and old fields were not renewed. It is easy to see, then, that buyers abroad had reason to complain about the quality of the Java citronella oil. Conditions became so serious that finally the Netherlands administration had to step in and, by enacting a number of

strict control measures, save the industry which had been a source of considerable income to the colony. How well Java's government succeeded in the task of rehabilitating the reputation of its citronella oil, we shall see in a later chapter.

Soil, Climate and Altitude

THERE exist in Java several varieties of wild growing sereh grass, but they have no practical significance. All plant material which serves for distilling originates from numerous plantings both small and large.

Altitude, climate and soil conditions profoundly affect the vitality and life span of the plant as well as yield and quality of the oil, particularly its citronellal content. Thus, uniformity cannot be expected when the oils originate from different producing regions. For a long time citronella was considered a very sturdy grass which could get along even on poor soil. This belief caused many costly errors because such soils, after a promising start, are quickly exhausted; they do not support citronella for several consecutive years without crop rotation, resting and thorough green fertilizing. True, it sometimes appears that even exhausted soils yield a fair amount of oil, on the condition that other favorable factors intervene, for instance an ideal succession of rain and sunshine. As a rule, though, the yield and quality of oil from plants raised on poor soil are normal only for the first three years and then rapidly decline.

Citronella grass grows in the plains as well as at altitudes up to 2000 feet and more. All kinds of soils, provided they are sufficiently fertile, suit the purpose. Rich, alluvial soil at a height of about 600 to 700 feet and in a humid climate would probably offer most favorable conditions for good yield and quality of oil and also guarantee sufficient longevity of the plantings. In lower regions the grass grows very slowly during the dry season with constant danger of dying off if cut in the beginning of or during that period. Heavy and loamy soils of bad tex-



ture are not suited for citronella; neither are waterlogged soils, partly submerged, partly dry, unless they are carefully drained. According to one of the best authorities on the production of citronella oil, Dr. A. Hischmann⁵ of Batavia, calcareous soils with only a thin sand layer yield good grass and good oils for a time but are quickly exhausted. As soon as the roots hit the lime sub-soil, the oil loses in citronellal content. Hischmann believes that sandy soils on which the grass does not grow too high offer the natural precondition for a good oil; besides, such soils are less afflicted with weeds. Deep sand, sufficiently rich, is often better for certain grasses than loamy or even fertile soil. Although the growth of the grass on such sands is meager and the quantity not large, the proportion of oil in relation to weight of grass is more favorable. When the grass grows too quickly, the formation of oil becomes a secondary function and, after all, the grass itself is only ballast. It is more advantageous to obtain a higher percentage of oil in a smaller amount of grass because bulk of grass increases cost of transportation, labor and steam. Virgin soil cleared from jungle yields, like irrigated land, a tremendous amount of grass for the first years, to the detriment of oil formation. Such was the case with some newly established plantings in Sumatra which produced very insignificant quantities of citronella oil.

Altogether, it can be said that the soils really suitable for citronella are not numerous and not always esteemed because most producers seem to be impressed by an abundant yield of grass rather than by a meager growth and a better yield of oil.

Planting and Cultivating

THERE exist no firm rules in regard to laying out plantations because of great variation in the nature of terrain, available labor and wages. After being cleared of trees, the land is burned over and plant holes are dug. If a planter can afford extra labor, the field, after being burned, should be gone over with a



mattock. The more intense the cultivation, the more favorable the results. In slightly hilly ground, square fields of about 4 hectares are laid out. Wagon roads should not be forgotten. In very hilly regions, conditions are entirely different and the grass must frequently be planted on slopes which are not suitable for rice or other crops. Sereh grass may grow quite well there, provided the soil is not too poor.

It is possible to raise citronella successfully in young rubber plantations about four to five years old with the rows of high pruned trees more than 24 feet apart. Sereh grass grows in the sun and in the shade, but in the latter case few new shoots appear; the growth is retarded

and, consequently, there is not more than one yearly harvest. The blades become hard and woody so that cutting results in too much stalk material in proportion to leaves. Shade is also detrimental to the yield of oil and the total geraniol content.

Since the grass requires a fairly large amount of moisture, planting must take place only during the rainy periods. Thus, new grass fields are usually laid out in December-February, i.e. during the first part of the rainy season. No grower would dare to start a planting during April-October because of the risk of losing his investment during the dry season. New plants which have not developed sufficiently during the latter part of the rainy season, that is up to May,



usually die early in June-September; those that survive are sub-normal.

Planting material (bibit) for sereh grass is obtained by dividing old clumps; the best type originates from Buitenzorg. Although sereh grass does flower, it is difficult to cultivate it from seed. When shipping bibit, the leaf must be torn off beforehand and the cuttings dried a little in the shade. Wet planting material, for instance that which has been rained upon, easily spoils.

About ten sturdy stalks can be obtained from each clump. Calculating two stalks to each planting hole, one acre of thinnings would yield material for five acres of a new planting. On good soil, the planting distance should be three by three feet; it may be less in poorer soil. If a planting is to last only a short time, two feet by two feet is sufficient. The period between harvests should also be considered because a longer growing time requires a greater planting distance.

There are several ways of planting sereh grass. One either digs a hole with a mattock or dibble, which probably gives the best results, or one plants in gullies. It is necessary to plant the cuttings rather deep because the clumps easily work themselves out of the ground. Hilling up, loosening of the soil and weeding are advisable in order to improve the yield and maintain the plantation, but in actual practice little care is exercised, and it is even doubtful whether the expense is worth while during periods of low oil prices.

With regular cutting at intervals of about three months, starting from the beginning of the second year after planting, the plantation should be discontinued after the fourth year because the sereh grass is rather soil exhausting and any prolongation would be detrimental to the soil, the plants, the yield and quality of the oil. After the fourth year, the yield of grass and oil diminishes considerably and from the fourth to the eighth year only 40 per cent of the quantity of grass, at most, can be expected. Aside from exceptional cases, cultivations older than five

years are scarcely profitable. Still, one frequently encounters plantations which are renewed only when the grass no longer gives sufficient yield; there even exist fields which are harvested up to the twelfth year but this, of course, is quite uneconomical in most cases. The natives, who plant small patches from one-quarter hectare to two hectares and on cheaper ground, generally discontinue sereh grass after the third year and rotate the crop by raising peanuts or tapioca. It is a fact, however, that only poor yields are obtained when the grass is regrown later on those same fields because this type of rotation does not give the soil any rest. While native plantings seldom last longer than three years, the large estate plantings last from four to five years and sometimes longer because their soil is usually more fertile and greater care is taken in laying out the sereh fields. It is difficult to make definite statements regarding the life span of a sereh plantation. There do exist a few 20-year-old plantings which are still good but, in general, one-quarter to one-third of the European plantations consist of fields four to eight years old.

During the years previous to the present war, the very low prices of the oil made it unprofitable to plow under old plants and lay out new plantings; changing over to the cultivation of other crops was even more difficult. The financial difficulties caused by the world depression had gradually forced the large estates to turn over the growing of sereh to the natives and to rely upon purchased native-grown grass. As a result, the large distilleries on the old European estates had to work up ever greater amounts of grass grown by the natives from seedlings which had been supplied by the estates. Once the natives had their own plants it was easy for them to continue propagating, with the result that the native plantings in the vicinity of the old estates have increased enormously. The natives, with the help of their families, can operate at much lower cost and therefore it is becoming more and more difficult

for the estates to maintain their sereh plantings. Native plantings two to three years old have supplied about two-thirds of the total amount of grass harvested during the past eight years. According to Hischmann's⁶ critical analysis of government statistics from 1932 to 1936, European estates today comprise far more older plantings than in former years.

Fertilizing

WHEN renewing a planting of sereh grass, the soil must first be regenerated. The fertilizers which would seem most appropriate cannot be used in Java for several reasons. The distilled and exhausted grass serves as fuel for distillation, coal being almost unknown in Java and wood being too expensive in many sections or having little fuel value. Chemical fertilizers, such as used on sugar plantations, are costly, and stable dung is not available in sufficient quantity. The estates used imported fertilizers when the fields were replanted after the first four years, with the result that the yield of grass increased but that the yield of oil remained subnormal, as compared with plantings on fresh soil. Therefore, according to Hischmann⁷, *Tephrosia candida*, *Tephrosia Vogelii*, *Crotalaria* and various mimosa varieties are used as green fertilizers because they throw off an enormous amount of leaves.

After these bushes have grown on a field for two years, the ground when plowed becomes loose and almost springy, like mossy forest soil, and recuperates beautifully. While the estates try to leave these bushes on the plantings for at least one year, the small native growers, always on the verge of starvation, are not able to employ this method at all because they cannot afford to leave their ground unproductive for one year, or rather for two years actually, because a new sereh planting yields nothing for the first eight or nine months.

Java has not done much to improve the quality of the grass by
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ROSIN...

*its possible use in the present emergency
as a partial replacement for coconut oil*

By W. D. POHLE

U. S. Department of Agriculture

AS the demands of national defense and reduced import facilities make usual supplies difficult to obtain, it may become necessary for soap makers to consider modification of present processes and products, making use of more readily available materials. In this connection a brief review of the properties and some data on sodium rosinate may be of interest.

Rosin has been used in soap making since the middle of the nineteenth century. It blends successfully with fats and oils to give quality soap products. In the past some have used excessive amounts of rosin in soap. Excessive use, is, of course, most common when rosin is much cheaper than fats and the hope of greater immediate profit seems more desirable than the good will of the customer. The improper blending of rosin and fats in soap making is probably responsible for much of the prejudice against soaps containing sodium rosinate.

The principal fatty acids present in soap are caprylic, capric, lauric, myristic, palmitic, stearic, oleic, linoleic, and linolenic, the amounts present in a given soap depending upon the fats and oils used. Examination of the properties of the soaps of individual fatty acids shows that not all are similar. Some of these soaps have many desirable properties while others are not satisfactory when used alone. Comparison of sodium rosinate with the soaps of individual fatty acids indicates that sodium rosinate resembles sodium laurate more than the soaps of the

other fatty acids mentioned above. In view of the similarity of sodium laurate and sodium rosinate it appears that rosin might be used to replace part of the coconut oil used in soap products.

Rosin soap (sodium rosinate) should be looked on as a material that has to be blended with other soaps, just as the soaps of different fats and oils are blended. Proper blending of rosin soap with fatty acid soaps will yield quality products while other blends, even with the same amount of rosin, may be unsatisfactory. In general, the addition of sodium rosinate to a fatty acid soap increases the solubility of the soap, softens the soap to some extent and increases the lathering properties of difficult soluble soaps.

Today rosin is used chiefly in yellow bar soaps. Several factors responsible for this limited use are: the trend towards white soap products; the fact that rosin contributes some color to soap; disinclination to change the present product as present procedure and supplies are entirely satisfactory; and the belief that only dark colored products can be made with rosin.

Very light yellow soap flakes as well as light yellow bar soap can be made that contain as much as 20 per cent rosin. If the rosin is properly stabilized either catalytically (2) or by hydrogenation (1) it contributes little or no color to soap products. White soap products can be made with stabilized rosins. The use of these rosins will depend upon their

prices in relation to those of the fats and oils used in soap.

In normal times plant operation and control are given more attention than modification of the product. As fats and oils increase in price and become more difficult to obtain, more attention will be given to the use of more readily available materials. Serious consideration, we believe, will show that rosin can be used profitably in many soap products. The amount and extent to which it can be used will be determined by the products and materials available.

Many who have used rosin in the manufacture of soap are familiar with its properties and know how it can be used to best advantage in soap products. However, the literature on rosin soap and its relation to fatty acid soaps used in the detergent field is limited. To extend the literature on rosin soap, the Naval Stores Research Division undertook a study of rosin soap. These studies dealt with the color that rosin contributes to soap (7), surface tension (4), titre (3), detergent action (8), foaming properties (5), solubility of calcium soaps of gum rosin, rosin acids and fatty acids (6) and germicidal activity of rosin and fatty acid soaps (9, 10).

It would be unwise for me to try to give exact ways in which rosin should be used in a specific soap product as the amount used and manner of use will depend upon the equipment and materials available. All I wish to do is to call attention to the possibility of using rosin in

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Soap Industry Meeting

considers fat and oil outlook, restrictions on inventories, glycerine situation, hears Wrisley. Association re-elects Deupree

THE emphasis was decidedly on glycerine at an Industry Meeting of soap and glycerine manufacturers, held January 14th at the Hotel Waldorf Astoria, New York. The meeting was held in conjunction with the Fifteenth Annual Meeting of the Association of American Soap & Glycerine Producers. Soap makers were told very definitely that the government thinks of them in the present emergency primarily as glycerine producers, and that for the duration of the war soap, not glycerine, will be the industry's by-product. It was indicated that supplies of fats will continue to be expedited for industry use, but that in return the government will expect soap manufacturers to recover every possible pound of glycerine. The industry will probably be required by the government to reduce sharply the sales of glycerine for non-essential uses.

E. H. Little, president of Colgate-Palmolive-Peet Co., and eastern vice-president of the Association of American Soap & Glycerine Producers, presided at the meeting in the absence of R. R. Deupree, president of the association, who was unavoidably absent attending a meeting of the new War Labor Board in Washington. The only speaker was George Wrisley, chief of the Soap and Glycerine Unit of the Office of Production Management, now the War Production Board. John B. Gordon of the Bureau of Raw Materials and J. W. Baker of the Philippine Refining Corp., were present as guests and participated in the discussion. Officers and directors of the association were introduced and remarks were made by

D. M. Flick of Armour & Co., F. A. Countway of Lever Bros. Co. and Roscoe Edlund, manager of the association.

In his statement to the industry, Mr. Wrisley dug back into the record and reviewed for his listeners some of the problems which soap makers faced during the first World War. He recalled that fat and oil prices during the first world conflict mounted to three and four times their pre-war level—that soap advanced 65 per cent—that soap makers occupied a place in Class 4 as a relatively non-essential industry—and that no official step was ever taken to limit the content of glycerine in soaps, although such a measure was receiving very serious consideration just before the war ended. Some of the obvious contrasts with the present picture were noted.

Mr. Wrisley reviewed the organization and functions of the Soap and Glycerine Unit of the Office of Production Management, which continues to function now as part of the new War Production Board headed by Donald Nelson. Principles which, Mr. Wrisley said he felt must be kept in mind in relationships between the Soap and Glycerine Unit and the soap and glycerine industry, might be summarized as follows:

- (a) To win the war is first. Everything else must be secondary.
- (b) Attention must be given, nevertheless, to the welfare of soap and glycerine, and the producers thereof, for the long pull.
- (c) Necessary burdens and sacrifices must be distributed as equally as

possible in the industry in proportion to capacity and ability. The same principle must apply among customers where burdens and sacrifices are of a character that must be passed on to them.

- (d) Producers should be permitted to conduct their businesses with the minimum of interference and regulation consistent with war needs.
- (e) Voluntary cooperation will be sought. It must be realized, however, that where voluntary cooperation is not sufficient, mandatory regulation must be used.

Mr. Wrisley said that an Advisory Committee of soap and glycerine makers would shortly be appointed to confer with government officials on problems of glycerine, soap, and the raw materials from which they are made. Subsequently a Committee of 17 members has been announced, and the first meeting of the Committee has been summoned to meet with Mr. Wrisley and officials of the War Production Board in Washington on February 5.

With the accent on glycerine recovery, a number of questions were submitted by some of the smaller soap manufacturers—not operating glycerine recovery plants—in an attempt to determine how their activities would be affected. They were advised to make diligent effort to arrange with concerns operating glycerine equipment to treat their spent lyes, or to shift to fatty acids instead of oils as raw materials. Representatives of a number of glycerine producers present advised that they were recovering glycerine for many small soap manu-



E. H. LITTLE
... presides at soap meeting

facturers and would be perfectly willing to extend their activities in this direction wherever costs of transportation, containers, evaporating, etc. could be handled within the ceiling prices on glycerine set by the OPA.

The problem of the potash soap manufacturer was touched on by C. L. Weirich of C. B. Dolge Co. and Dudley Bachrach of Clifton Chemical Co. who pointed out that heretofore it has been the practice, and in fact has been a practical necessity, to leave the glycerine in soaps of this type. Manufacturers of these soaps were advised to make every effort to swing over to use of fatty acids. Arrangements might be made, it was indicated, to trade present oil stocks for fatty acids. The eventual point of decision as to how stringent a control of potash soap manufacture is adopted may not be reached until it becomes clearer how serious the glycerine shortage may become, but all non-glycerine producing manufacturers of soaps were advised, nevertheless, to give utmost attention to this problem without delay. If the need for glycerine becomes greater than the need for soaps from which glycerine cannot be effectively recovered, it is obvious that the glycerine need will have to be considered paramount.

As a corollary of the war need for glycerine it was pointed out that obviously controls must be exercised on sales. Glycerine can probably be allowed by the government to go only

into the most essential uses, and consumption in other channels may have to become subject to strict control. There has been no intent up to the present to stop use of glycerine for non-defense purposes, but every effort has been made since the day following Pearl Harbor, to prevent undue accumulation of glycerine stocks by such users. Beginning last December 8, Mr. Wrisley requested glycerine producers not to make deliveries which bring a user's stocks above a 30-day supply. Exceptions have been made in administration of this control, however, to allow purchasers to buy in normal units—tank cars to tank car buyers, etc.

MR. GORDON was called upon to discuss aspects of the oil and fat situation, clarifying the purposes behind the recent addition of coconut oil, copra, and palm oil to the group of products covered by General Imports Order M-63. This action, taken by the government January 12, had the effect of placing these products on the highest list of strategic materials imported into the country, said Mr. Gordon. While under the order application to make or distribute all such imports is contingent on government approval, the essential purpose of the order, he pointed out, is to do everything possible to encourage such imports and to make the necessary shipping space available. A second purpose behind the order, he added, is to make certain that such stocks of these strategic materials as are in the country or as may arrive, are used for essential purposes.

Mr. Gordon stated that in his opinion it would be unwise to attempt to add to M-63, any oils that now come principally across the Atlantic. Because of the situation in the Pacific, it is decidedly advantageous to have the help of this order for oils like coconut and palm. But for palm-kernel and babassu, it would be questionable whether the advantages of having them put on the strategic imports list would com-



R. R. DEUPREE
... again heads soap assn.

pensate for the disadvantages of the controls which the order imposes.

In response to numerous questions about the 90-day inventory control order—OPM Order M-71, questioners were advised by Mr. Wrisley that modifications and amendments to the order were being drafted in an attempt to preserve the purposes behind the order, while making it more workable in actual practice. (The revised order has now been issued.)

Turning to the subject of possible replacements for coconut oil cut off by Japanese action, soap and glycerine makers were advised by J. W. Baker that shipments have ceased from practically all parts of the Pacific. The only places remaining from which coconut oil might be

(Turn to Page 65)

GEORGE WRISLEY
... addresses industry meeting





Phillips Petroleum Co., Bartlesville, Okla., enters the cattle spray field this year with its newly packaged "66" livestock spray made for the Phillips company by Whismire Research Corp., St. Louis. Can is lithographed.

New Products and



Latest offering of R. M. Hollingshead Corp., Camden, N. J., "Whiz Phenolic Disinfectant No. 32" was released for distribution on January 1st. Container was designed by the Whiz art department, headed by Fred Obeck.



An easy method of removing wallpaper by dissolving the paste is claimed by Soilicide Laboratories, Montclair, N. J., makers of "Stripoff". Also recommended for washing woodwork. The 2 ounce bottle makes 2 quart of solution.

Packages

A large, bath-sized version of its toilet soap was recently put on the market by Maria Danica Co., New York, at 85 cents a cake. The new size retains the same curved, self-draining shape, and lemon odor of the smaller cake.



The chemical division of Procter & Gamble Co., Cincinnati, is currently pushing its well-known "Chipso" in a new condensed flake form. Package has been redesigned appropriately in keeping with the P&G claims for "brighter washes" and "more suds per cupful."



Patriotic colors on cap and label feature the package of "Diversol Bactericide Disinfectant" just brought out by Diversey Corp., Chicago. Decorated metal screw cap by Aridor Co., Chicago, was designed in cooperation with Owens-Illinois Glass Co.



TURNER

CAUSTIC SODA
PERSULPHATE OF POTASH
PERSULPHATE OF AMMONIA

Plan now to attend the 17th Annual Drug &
Chemical Trade Banquet at the Waldorf-
Astoria, on March 12th.



JOSEPH TURNER & COMPANY
RIDGEFIELD, NEW JERSEY

83 Exchange Place, Providence

40th St. and Calumet Ave., Chicago

NEWS

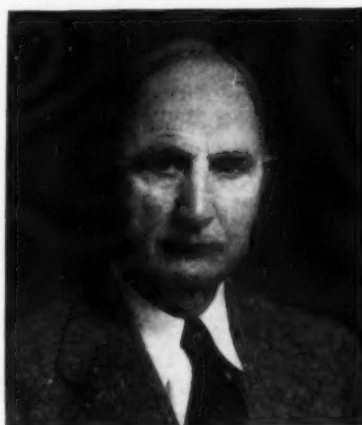
Oil & Fat Suppliers Meet

Nearly 80 members of the oil and fat trade met January 20 at the Downtown Athletic Club, New York, to discuss the current problems facing the industry, including price ceilings, M-orders, inventories and the war in the Pacific. Principal speakers at the meeting were John B. Gordon, of the bureau of raw materials, Washington, D. C., and John Redding, J. H. Redding Co., New York, who presided.

Ittner Receives Perkin Medal

The Perkin Medal for 1942 was presented January 9 to Dr. Martin H. Ittner, Colgate-Palmolive-Peet Co., at a joint meeting of the American section of the Society of Chemical Industry, the American Chemical Society, the American Institute of Chemical Engineers, the Electrochemical Society and Societe de Chimie Industrielle. The medal, which is awarded annually for outstanding work in applied chemistry, was presented by Dr. Marston T. Bogert, following which Dr. Ittner gave an address on the subject "Forty-five Years of Chemistry in a Soap Plant." In Dr. Ittner's speech, he traced the development of important improvements in the manufacture of soap during the past 45 years. These included devising means for preventing development of rancidity in soaps and the employment in soap of small quantities of certain complex phenolic compounds to accomplish this, the development of catalysts and methods for the hydrogenation of fatty oils, the perfection of a method for the continuous refining of oil with alkali solution, and the development of a method for the purification of soap by means of continuous centrifugal separation. He also discussed a new method for refining glycerine which results in a

greatly improved process with lowered costs of refining, and methods which have simplified, cheapened and improved the distillation of fatty



DR. MARTIN ITTNER

acids. In concluding, he reviewed a method for making an improved soap from petroleum hydrocarbons by converting certain objectionable acidic materials, formed by the oxidation of the hydrocarbons, into soaps with desirable properties, and at the same time removing certain objectionable impurities.

"C. O. Johnny" Back Again

B. G. Pratt, of B. G. Pratt Co., New York, writes us to comment on our story about "Coal Oil Johnny" which appeared in the August, 1941, issue of *Soap & Sanitary Chemicals*. Says Mr. Pratt: "I bought the first 'Little Giant Soap Machine' ever sold by William A. Grant in April, 1887 . . . Coal Oil Johnny Soap was the first pure cocoanut oil soap that did not readily turn rancid. I still have a sample that is over 40 years old, which has laid unwrapped on a shelf for more than 25 years."

Heyworth New Lever Head

Geoffrey Heyworth, former vice-chairman of Lever Brothers and Unilever, Ltd., London, was elected last month as chairman of the board of the firm succeeding to the vacancy caused by the death of Sir Francis Darcy Cooper. Mr. Heyworth, who is 47 years of age, began his connection with the Lever organization when he was 18. He was born at Birkenhead and was educated at the Dollar Academy. A short time after joining Lever Brothers in 1912, he was noticed by the first Lord Leverhulme and was sent to Canada where he trained several years. In 1924, he returned to England, resuming work at the Port Sunlight works. In 1929, he became chairman of Joseph Crosfield & Sons, a firm associated with Lever Brothers, and a director of Unilever, Ltd., in 1931. Last year he was elected vice-chairman. His position as vice-chairman has been filled by Paul Rykens and Herbert Davis who have been elected joint vice-chairmen.

"Woodbury Soap" in 60th Year

A special sale of "Woodbury Facial Soap" is to be held throughout the United States to celebrate its 60th anniversary, Andrew Jergens Co., Cincinnati, announced recently. The company plans to advertise the product extensively during 1942, it was said.

D-12 to Meet March 9-10

The Spring meeting of committee D-12, the soap and detergents committee of the American Society for Testing Materials, is to be held March 9 and 10 at the New Yorker Hotel, New York. B. S. Van Zile, Colgate-Palmolive-Peet Co., Jersey City, is secretary of the committee.

Times Surveys Shampoo Market

"A Study of Liquid Shampoo in the New York City Market," just released by the market research department of the New York Times, reveals some interesting data on the consumption and popularity of 15 branded shampoos found to have general distribution in Greater New York. The brands covered by the survey are: "Drene", "Fitch's", "Watkins Mulsified", "Kreml", "Conti Castile", "Halo", "Wildroot", "Admiracion", "Mar-O-Oil", "Palmolive", "Packer's", "Henna Foam", "Marchands", "Jeris", and "Pinaud". Average weekly consumption of these brands per 1,000 families is reported as \$66.42 among high-income families, \$35.35 among medium-income families, and \$21.92 among low-income families. Other conclusions drawn are that distribution of the 10-cent size was the main factor in low-income areas, whereas in high and medium-income areas the higher priced sizes generally have much better distribution; that an average drug store situated in high-income sections does 2½ times the business of an average drug store in low-income areas. It is also shown that in high and medium-income sections combined, 56 per cent of the total stores which serve 54 per cent of New York families account for 72 per cent of the total business.

Larkin Soap Club Still Active

The Larkin Soap Club—yes, that's right, the Larkin Soap Club—held its regular monthly meeting in Chicago in January and made plans for all out war on Hitler and the Japs. Although there hasn't been any Larkin's soap, or soap wrappers or premiums for 15 years or more, this venerable vestige of a once-profitable soap selling scheme still carries on. Organized nearly 40 years ago, the Chicago club has been continuously active from the start. When Larkin's soap went off the market members continued to meet. During the first World War the group knitted, sewed and made bandages for the Red

Cross. At the January meeting they arranged to revive this work and, in addition, to put their monthly dues—the money they used to spend for soap, so they could get wrappers for premiums—into war savings stamps.

Soap Pay Roll Index Drops

The pay roll index of the soap industry, as reported by the U. S. Department of Labor, dropped from 142.2 in October, 1941, to 138.4 in November, 1941. (The 3-year average 1923-25 equals 100.) Pay roll index for November, 1940, was 100.2. Employment index for the industry also dropped in November, from 97.7 in October, 1941, to 96.4 in November, 1941. This compares with 84.5 for November, 1940.

Package Competition Opens

The 11th annual All-America Package Competition, sponsored by *Modern Packaging* magazine, opened January 21 at the Grand Central Palace, New York. Unlike previous competitions when entries were divided into package-type classifications, this year entries are classified according to industries. Among the classifications are: cosmetics, toilet preparations, and articles; drugs, chemicals, and drug sundries; and groceries. More than 2,500 exhibitors enter the competition every year. The exhibit is to be open to the public through March 10, and announcement of awards to outstanding entries will be made early in April.

Nu-Ball Mfg. Co. Moves

Nu-Ball Manufacturing and Research Laboratories, Des Moines, manufacturer of "Nu-Ball," liquid cleaner for athletic balls, has just moved its office and laboratories to new quarters at 4706 University Ave.

Squibb Profits Rise 35%

E. R. Squibb & Sons, Brooklyn, and their domestic and Canadian subsidiaries report net profit of \$520,236 for the quarter ended September 30, 1941, compared with \$396,477 for the same period in 1940.

Armour Business Gains 26%

Business done by Armour & Co., Chicago, during the fiscal year ending Nov. 1, 1941, showed a gain of 26 per cent in dollar volume and 6 per cent in tonnage over the previous year, George A. Eastwood, president, revealed in his recent annual report to shareholders. Earnings amounted to \$16,679,862. Earnings of Armour Auxiliaries, including Armour Soap Works, are lumped with other income and no separate report of the company's soap business is available. Mr. Eastwood's report deals at some length with the utilization of a "Last-in, First-out" method of pricing certain inventories, which was applied for the first time last year on a number of slower turning inventories, including soap. Briefly, the system, which is permitted through a 1939 amendment to federal income tax laws, prevents a rise in prices from making paper profits and likewise prevents a fall in prices from making paper losses, with proportionate effect on taxes payable. "As a result of this change in the basis of pricing these particular inventories," says Mr. Eastwood's report, "the consolidated inventories as of Nov. 1, 1941, are carried at approximately \$5,750,000 less than they would have been, had no change been made."

Warner Expands Chi. Offices

Warner Chemical Co., division of Westvaco Chlorine Products Corp., recently expanded its Chicago office and is now occupying new quarters in the Board of Trade building at 141 W. Jackson Ave. W. Newell Wyatt is divisional sales manager in charge of the territory.

Verley Moves Offices

Albert Verley, Inc., manufacturer of aromatic chemicals, has leased new quarters for its Chicago activities in the Pelouze Building at 232 East Ohio Street. Extensive improvements are to be made in the two upper floors, where the 17,000 sq. ft. of space available will provide for expansion to handle business requirements.

Mathieson's 50th Year

FIFTY years ago, at Saltville, Va., Mathieson Alkali Works began the construction of a plant for the purpose of supplying high-grade caustic soda and soda ash to American manufacturers of soap, glass, paper, textiles and other materials. At that time, most of the alkali being used in the United States was imported. Its price was higher than that of the domestic product, but for reasons of quality, there was a strong prejudice in favor of the imported material. Recognizing the need for a low-cost alkali that was as good as the foreign material, Mathieson's founders brought over from England a group of chemical engineers and expert workmen to supervise the construction of a new plant.

The Saltville plant went into production in 1895, producing the purest soda ash and caustic that could then be made. In the same year, Mathieson obtained control of the Castner electrolytic process for making caustic, which was unique in its ability to produce almost chemically pure caustic on a commercial scale.

After considerable experimentation, one of the first electro-chemical plants to be built at Niagara Falls was erected and the production of the new grade of caustic was begun in 1896. This plant was operated by a Mathieson subsidiary, Castner Electrolytic Alkali Co., which remained in existence until 1917, when it was merged with the parent organization.

Mathieson also pioneered in developing another pure alkali—ammonia. Combining hydrogen, a by-product of the Castner process, with atmospheric nitrogen, it was the first company to produce synthetic ammonia on a commercial scale.

Another development of importance to the soap industry was that of shipping caustic in the liquid state—and Mathieson was one of the pioneers to work out a system of delivering liquid caustic in tank cars. From the by-product chlorine from

the Castner process, Mathieson developed a process for making calcium hypochlorite which, unlike bleaching powder, is stable in storage and dis-



E. M. ALLEN
Mathieson President

solves without forming a sludge. Calcium hypochlorite, under the trade name "HTH" is sold by Mathieson for chlorination of swimming pools, sewage plants and water works. A modification, called "HTH-15," yields sodium hypochlorite when added to water.

Today Mathieson, like the rest of American industry, is primarily concerned with the war effort. One of its contributions is the production of chemicals for public health protection, both military and civilian.

Procter & Gamble Profits Up

Procter & Gamble Co., Cincinnati, recently reported net income for the six months ended December 31, 1941, of \$13,015,305, or \$1.98 a share, against \$9,610,027, or \$1.45 a common share in the comparable 1940 period. For the three months ended December 31, 1941, earnings were reported as \$6,040,701, or 92 cents a share, as compared with \$5,020,035 for the quarter ended December 31, 1940. Earnings, the company stated, include only those that

have been received in United States funds, and exclude earnings of the Cuban subsidiary and an undistributed surplus in the Philippine Islands of some three millions. The company operates a soap, cooking fat and margarine plant in the Philippines which has been servicing the company's products in the islands and other points in the Far East. A small plant is also operated in Java by the company.

Deupree on War Labor Board

R. R. Deupree, president of Procter & Gamble Co., Cincinnati, was appointed by the President of the United States last month as an alternate industrial member of the War Labor Relations Board.

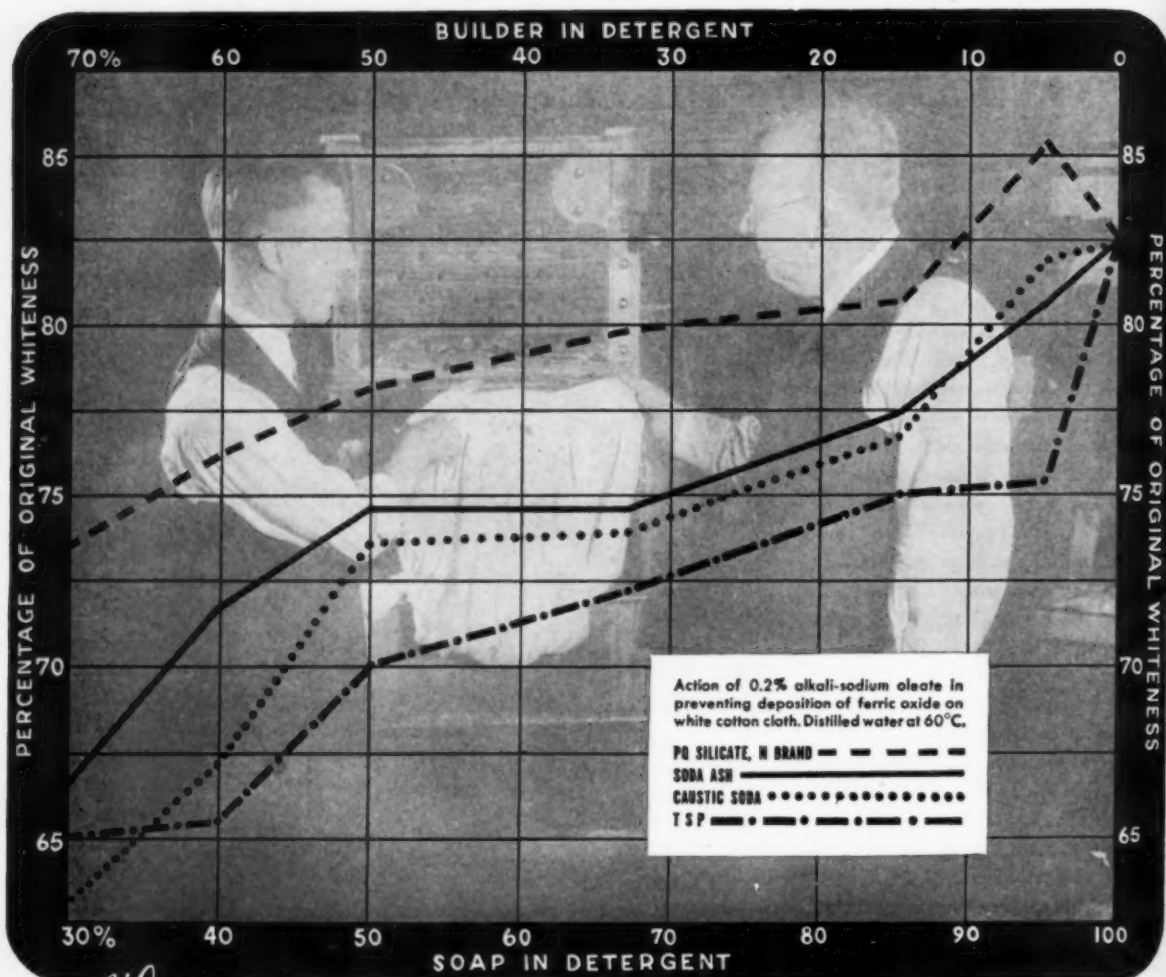
Healy New C-P-P Ad Manager

Robert E. Healy was appointed late last month as advertising manager of Colgate-Palmolive-Peet Co., Jersey City. Mr. Healy has been with the company in its advertising department for the past eight years. Savington Crampton and George MacGregor were made assistant advertising managers.

BIMS Buy Bonds

Ten \$50 defense bonds were distributed at the annual dinner of the BIMS of New York, at the Hotel Lafayette, New York, on January 22, as a result of chances sold among the 150 members and guests who attended. Martin Schultes of the Hewitt Soap Co., chairman of the group, arranged the party and conducted the drawing for the bonds. He was assisted by Harry Griffiths of the Pennsylvania Drug Co. In addition to Defense Bonds sold through chances, the BIMS gave away to those who attended five \$25 bonds.

Among the winners of Defense Bonds were Fred Lueders of George Lueders, Sewell Cochrane of Wirz, Gregory Thomas of Bourjois, A. F. Anderson of Naugatuck Aromatics, Al Egeter of Plaskon, Charles W. Darr of Harriett Hubbard Ayer, Dudley Shaw of Allen B. Wrisley, R. C. Payton of Yardley, Clifford Marsh



*How SiO_2
Aids Cleaning—*

PQ Silicates Banish Removed Dirt

DIRT REMOVAL, as you know, is a two-fold operation—first, taking the dirt out and second, preventing the dirt from re-affixing itself to the clean object. PQ Silicates provide soaps and detergents with a higher efficiency in both functions. Thus cleaner fabrics and surfaces result when PQ Silicates are used as builders.

Every soap manufacturer knows that pure soap, while it is effective in preventing soil

redeposition, it lacks certain other qualities and is costly. For superior protection against soil deposition, choose the right alkali. (See chart above.) Sodium oleate (0.2%) alone protects cloth to the extent of 82.5% of original whiteness. But 95 parts soap plus 5 parts sodium silicate give even better results, 85.5% whiteness. The silica content of the silicate aids in producing whiter whites and brighter colors. May we discuss the role of silica in your products?



PHILADELPHIA QUARTZ CO.

SILICATES OF SODA

125 S. THIRD STREET, PHILA., PA.

of Menley & James, and F. A. Nicholson of Richardson, Taylor & Globe.

Chairman Schultes also announced the program for four golf tournaments to be held by the BIMS of New York next spring and summer, the first being scheduled at the Baltusrol Country Club, Summit, N. J., on Tuesday, May 12. The other three will follow during June, July and September, the final golf party to be held at the Ridgewood Country Club, Ridgewood, N. J. about the middle of September.

C-P-P Stress Safety of "Klek"

Colgate-Palmolive-Peet Co. is offering \$1,000 in cash to anyone "who can find a safer soap than Klek." Current newspaper copy announcing the award says its will be paid "to the first person who submits scientific proof that any soap in the world is safer for fine fabrics . . . than the new Klek." The offer expires next Dec. 31.

P&G Sample "Duz"

Procter & Gamble Co., conducted a sampling campaign for their granulated laundry soap, "Duz," in Chicago during January. Full size packages of the product were distributed from door to door in residence districts.

Traffic Mgrs. Meet

I. W. Humphrey, traffic manager, Emery Industries, Inc., was general chairman of the committee on arrangements for the 18th annual meeting of the Ohio Valley Transportation Advisory Board at the Hotel Gibson, Cincinnati, on Jan. 12-13, which was attended by over 350 executives representing manufacturers and distributors in Ohio, Indiana and Kentucky.

Toluene Under Allocation

Effective February 1, all toluene was placed under allocation in accordance with an amendment to general preference order M-34. Stocks on hand as well as production are affected by the amendment.

Searle New Crown Sales Head

F. Gladden Searle, formerly associated with Continental Can Co. as vice-president in charge of sales



F. G. SEARLE

and advertising, has just been appointed director of sales of Crown Can Co., division of Crown Cork & Seal Co., Philadelphia. Mr. Searle's connection with the can industry began in 1919 after his return from France where he was a member of the A. E. F. He was appointed district sales manager of the Syracuse office of Continental Can in 1927, and in 1929 he established the first packers can sales office for the company in New York, with the title of assistant manager of sales, packers cans. In 1936 he was made general sales manager of the company, and in the same year vice-president in charge of sales and advertising. Shortly thereafter he was elected to the board.

Collect Collapsible Tubes

Behind the slogan "America Needs Tin," America's 60,000 retail druggists are being enlisted in a campaign to get consumers to save collapsible tubes used for tooth paste, shaving cream and other drug products in order that the tin may be recovered and reused. Joel Lund, Lambert Pharmacal Co., chairman of a joint committee of the Packaging Institute of America and the Collapsible Tubes Manufacturers' Association, leader of the drive, has asked all manufacturers of collapsible tubes

to publicize the campaign through their radio and other advertising. Druggists are urged to place collection boxes for the tubes conspicuously in their stores, and under the plan announced by Mr. Lund, wholesalers will be asked to pick up and forward used tubes to the smelters. The Tin Salvage Institute, as it is to be known, is setting up special tin recovery and smelting equipment in Hillside, N. J. It is estimated that from 20 to 25 tons of collapsible tubes are thrown away every day. Among the members of the operations committee of the campaign are: Lee H. Bristol, Bristol-Myers Co.; George MacGregor, Colgate-Palmolive-Peet Co.; Charles Luckman, Pepsodent Co., and Ray Schlotterer, Federal Wholesale Druggists Association.

Deupree To Civic Post

Richard R. Deupree, head of Procter & Gamble Co., has been appointed co-chairman of the newly mobilized War Chest of Cincinnati and Hamilton County designed to channel fund raising activities "for the duration." The first objective is a campaign starting in May consolidating 1942 appeals of the USO, Community Chest and other organizations. Among those on the executive committee are Herbert G. French, vice-president, Procter & Gamble Co.

Emery Transfers Hibarger

E. G. Hibarger, New England manager for Emery Industries at Lowell, Mass., has been made southeastern manager, with headquarters at Charlotte, N. C. Mr. Hibarger has been with the company for ten years. J. Milton Washburn, formerly with Colgate-Palmolive-Peet's industrial division in Boston, has been appointed New England manager at Lowell, Mass.

Neuberg Opens New Offices

William D. Neuberg Co., New York, opened new offices with enlarged facilities last month on the 16th floor of the Graybar building, 420 Lexington Ave.

U.S.I. ALCOHOL NEWS

February

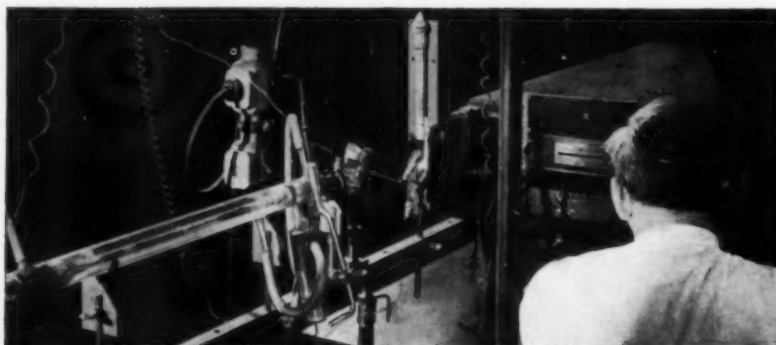


A Monthly Review of Technical Developments for Chemists and Executives



1942

SPECTROGRAPHIC TESTS HELPFUL IN CONTROL OF ALCOHOL PURITY



Spectrographic analysis of alcohol is employed by U.S.I. to supplement chemical tests, and to provide an additional safeguard of the high quality and purity of U.S.I. Alcohol.

Method is Employed by U.S.I. to Supplement Chemical Procedures

Spectrographic tests, by which the presence of small amounts of certain impurities can be detected, are extensively employed by U.S.I. as an additional safeguard of the high quality of its alcohol.

An excellent index of the purity of alcohol can be obtained by studying its absorption of ultra-violet light. Ethyl alcohol in a very pure state is almost as transparent to ultra-violet light as distilled water, but certain impurities decrease its transparency. Hence it is possible to obtain valuable information on alcohol purity by subjecting a sample to ultra-violet rays. Though these rays are invisible to the eye, the spectroscope provides a means of recording the transmission of the rays on a photographic film.

LIQUID POWDERS POPULAR FOR ARMS AND SHOULDERS



Liquid powders are among the most popular preparations for make-up of arms and shoulders, and are used also to increase the covering power of face powders.

Typical preparations of this type consist of suspensions of such substances as zinc oxide, titanium dioxide, or colloidal kaolin, with bentonite often used to aid in maintaining the suspension. The suspending medium may consist of a mixture of water and ethyl alcohol.

TECHNICAL DEVELOPMENTS

For further information, write U.S.I.

Color comparison of cosmetic products is simplified by a new, easily portable instrument, it has been announced. It is said that the device permits comparison of shades under ordinary artificial light and under artificial daylight, as well as under any one of three color filters.

(No. 540a)

A synthetic detergent is said to have a wide range of usefulness in improving the cleaning and emulsifying properties of a variety of cleaning compounds, including car-washing materials, rug-shampoos, and floor-cleaners.

(No. 541a)

New aromatic chemicals recently announced, to replace imported materials, include indol, diphenyl methane, styrallyl acetate, and a perfume grade of styrene.

(No. 542a)

A synthetic rhodol can be used to replace natural rhodol in all types of toilet preparations, according to the manufacturer. The new compound is not dependent on geranium Bourbon for its supply.

(No. 543a)

An amorphous wax is described as an entirely new type developed specifically for cosmetic and pharmaceutical applications. Maker says that the wax has a high degree of plasticity, is free from objectionable crystalline particles, holds oil without sweating, contributes to easy spread and smoothness.

(No. 544a)

The concentrated solution of aluminum acetate, described in the November issue of U.S.I. ALCOHOL NEWS (No. 512a) is primarily intended for use in the manufacture of Buraw's Solution N.F. and Solution Aluminum Subacetate N.F., rather than for general commercial use, the manufacturer has pointed out.

DRUG TRADES BANQUET TO BE HELD MARCH 12

The 17th Annual Drug, Chemical, and Allied Trades Banquet will be held on March 12 at the Waldorf-Astoria, New York. The banquet is sponsored by the Drug, Chemical, and Allied Trades Section of the New York Board of Trade, and proceeds will go to the Red Cross.

LIQUID DEODORANTS REMAIN IN FAVOR WITH CONSUMERS



Liquid deodorants continue to demonstrate their popularity with many consumers. In the formulation of products of this type, alcohol is frequently used to confer desirable properties. In addition to its antiseptic characteristics, alcohol has the advantage of increasing evaporation rate.

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND STREET, NEW YORK



BRANCHES IN ALL PRINCIPAL CITIES

Soapers As Minute Men

Lee Bristol, vice-president of Bristol-Myers Co., E. H. Little, chairman of the board of Colgate-Palmolive-Peet Co., and Richard R. Deupree, president of Procter & Gamble Co., were recently appointed to the newly organized National Defense Savings Minute Men Committee, according to an announcement of the U. S. Treasury Department. Members of the committee will make appeals in the interest of increasing participation in the defense savings program. The original committee of 29 minute men will be increased regularly through additional appointments, it is planned.

Essential Oil Assn. Elects

V. H. Fischer, Dodge & Olcott Co., New York, was elected president of the Essential Oil Association of U. S. A. at the annual meeting of the organization held January 9 at the Hotel Warwick, New York. John H. Montgomery, secretary of Fritzsche Brothers, Inc., was made vice-president, and Robert B. Magnus, Magnus, Mabee & Reynard, Inc., was elected secretary-treasurer. Charles Fischbeck, vice-president of P. R. Dreyer Inc., and H. C. Ryland, head of H. C. Ryland, Inc., were appointed members of the executive committee. A feature of the meeting was a report by Dr. Eric C. Kunz, Givaudan-Delawanna, Inc., chairman of the scientific committee, on his committee's deliberations with the U. S. P. and N. F. authorities on the new monographs for essential oils to appear in the coming revision of the compendiums. Other reports were presented by William B. Schilling, Norda Essential Oil & Chemical Co., and R. B. Magnus. Gert Keller, Schimmel & Co., chairman of the nominating committee, presented the slate of new officers.

Fritzsche Salesman Dies

James J. Cummings, a representative of Fritzsche Brothers, Inc., New York, for nearly twenty-three years, died accidentally January 8, at his home at Woodside, Long

Island, N. Y. During the World War, Mr. Cummings served as a lieutenant with Company B, Tank Troops, 335th Battalion. He was forty-eight years of age.

Restrict Alcohol Production

Deliveries of ethyl alcohol for use in shampoos, dentifrices, toilet soaps, shaving creams, mouth washes, deodorant sprays and other toiletries during the months February through December, 1942, have been restricted to 70 per cent of the quantities delivered for these uses during the corresponding months of 1941, by an amendment to general preference order M-30 announced January 12, by the division of Priorities, OPM. New restrictions were also laid on production, distribution and use of butyl and isopropyl alcohols by the same amendment.

Wecoline Merges With Drew

Wecoline Products, Inc., New York, fatty acids, formerly a subsidiary of E. F. Drew & Co., has just been merged with that company and is now operating as a division of the Drew Company.

Shulton Holds Sales Meeting

The annual sales meeting of Shulton, Inc., New York, was held the week of January 5 at the New

George Schultz, production manager, and Tess Tinker, Shulton secretary, at the annual Christmas party.



To Address Management Assn.

W. I. McNeill, director of public relations, Colgate-Palmolive-Peet Co., Jersey City, and Harold F. North, industrial relations manager, Swift & Co., Chicago, will be among the speakers at the national personnel conference of the American Management Association, to be held Feb. 4-6 at the Hotel Stevens, Chicago.

Correction

In the January issue of *Soap & Sanitary Chemicals* we inadvertently credited Shulton, Inc., with creation of the popular soap novelty "Dumbo" of Lightfoot Schultz Co.

Rubenstein Strike Ends

A strike of 200 employees of Helena Rubenstein, Inc., New York, cosmetics firm, which was called Oct. 14, ended Jan. 14 when the strikers returned to work with no immediate concessions granted. The three-month strike was led by the C.I.O. and was ended because of the war situation. The union will submit its case to the National Labor Relations Board, it is reported, and if it wins will press for a contract.

York sales office at Rockefeller Center. All sales policies of the company were analyzed and set for 1942 by the group consisting of Shulton executives from the home office and managers of four of the company's branch offices.



THIS LABORATORY ★ WORKS FOR YOU . . .

★ This laboratory is a miniature soap plant for the duplication, on a small scale, of modern manufacturing practices. Its equipment includes a stainless steel kettle, quickly convertible into a soap remelter or refining unit for oils and fats; a mixer and crutcher with stainless steel bowl and paddles, adaptable also for use as an amalgamator for mixing milled soap base, pigments and perfume prior to milling; a modern three-roll granite mill for milling soap under conditions which eliminate possibility of contamination with foreign materials; a laboratory plodder with electric heating nozzle to compress milled soap into continuous bars prior to pressing. Ample space is also provided for storage of experimental samples which are aged under conditions similar to those met with in commercial practice.

*I*t is one thing to create satisfactory and appealing perfumes for extracts and cosmetics, but quite another to produce them for soaps. That is why we have a separate and distinct research division devoting its time solely to the intricate problems of soap perfuming,—compounding the odors, preparing the soap and testing results under actual conditions of manufacture and use. This work is under the personal observation of skilled soapmakers, chemists and per-

fumers, each trained to his profession by years of practical experience.

We offer this service as one that has created odor appeal for some of the industry's best known products . . . and as one that is especially valuable today now that lack of basic materials is forcing soap manufacturers to revise their established formulas.

Therefore, whether you make toilet or dispenser soaps, shaving soaps or shampoos, in cake, flake, powder or liquid form, we believe we are qualified to help you either in adjusting your formula to present available materials or in supplying uniform, reliable, fairly priced aromatic chemicals and perfume raw materials with which to make your products more appealing and consequently most profitable.

The up-to-date facilities and experienced personnel of this complete service for soapmakers is at your disposal to assist you with your soap perfuming problems. We await your commands.



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BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.
BRANCH STOCKS
FACTORIES AT CLIFTON, N. J. AND SEILLANS (VARI) FRANCE

Plan Toiletries Trade Show

The Chicago Associated Toiletries Salesmen is the name selected for the new trade group whose organization in Chicago on Dec. 15 was reported in this magazine last month. Minor H. Andrews of Bourjois, Inc., president of the Association, has announced that among the activities to be promoted will be an annual trade show where all members will consolidate their exhibits instead of holding their shows individually, as in the past. Tentative date for the first of these shows has been set for next September. Membership of the group's Board of Directors, as announced by Mr. Andrews, includes the following: Walter Hauk, of Yardley & Co.; John Backer, Hudnut, Inc.; R. S. Edwards, Northam Warren Corp.; Harry Adamson, Elmo Sales Corp.; J. J. Hannon, Houbigant. Executive officers, including Mr. Andrews, W. R. Tenney, of Lenthéric, Inc., the vice president, and H. F. Carson, of Dorothy Gray, secretary-treasurer, will also serve on the board.

New Rust Preventive

A new product which prevents rust in metal tanks or pipes of lead, brass, and black, galvanized or cast iron, has been announced by Sudbury Laboratories, South Sudbury, Mass. The product—called "Aqua-Clear"—is also said to be useful in clearing out rust from old tanks and pipes. Use in a proportion of one ounce to each 100 gallons of water is recommended. Larger quantities are necessary to remove old loose rust. Rust formation is said to be prevented by the deposit of a thin, nonpermanent film on metal surfaces.

Suds One Year Old

Suds, the monthly newspaper of the employees of Allen B. Wrisley Co., Chicago, recently celebrated its first birthday. Emil H. Bronner, technical consultant to the Wrisley company, sent us our complimentary copy of the anniversary issue. Said Emil, "Usually 'Suds' comes from 'Soap.' Well, this one goes to it."



CHECK THE CAN TOO ✓

The Atlantic Refining Company made a careful check before deciding on the proper containers for their quality motor oils . . . and the organization to produce them.

Naturally, Crown Can is proud of the fact that the job of protecting Atlantic Lubricants was entrusted to this up-and-coming organization. Bring your can problems to Crown . . . where they will be given the alert, attentive consideration of men vitally concerned in seeing your interests fully protected. Crown's cooperative spirit has been a primary factor in Crown's rapid rise to third place in the industry in less than four years.



CROWN CAN COMPANY, PHILADELPHIA, PA.

Division of Crown Cork and Seal Company

BALTIMORE ST. LOUIS HOUSTON MADISON ORLANDO
FORT WAYNE NEBRASKA CITY

CROWN CAN

INDEPENDENT AND HELPFUL

Say you saw it in SOAP!

February, 1942

CONTRACTS AWARDED

Treasury Awards

Colgate - Palmolive - Peet Co., Jersey City, was awarded a contract for 22,500 lbs. hand grit soap at 8.25c in a recent opening by the Treasury Procurement Div., Washington, D. C. In the same opening Chas. W. Young & Co., Phila., was awarded a contract for 240 lbs. hard white soap at 40c.

Tar Soap Award

Hewitt Soap Co., Dayton, O., was awarded a contract for 700 lbs. tar soap at 13c lb. in a recent opening by the Post Office Supply Dept., Washington, D. C.

Metal Polish Bid

R. M. Hollingshead Corp., Camden, N. J., was the low bidder on 5,000 pts. metal polish at 8.57c in a recent opening by Navy Dept., Washington, D. C.

Soft Soap Bid

In a recent opening by Army Air Corps, Wright Field, O., Standard Oil Co. of Ohio, submitted the low bid on 30,000 lbs. soft soap at 7.25c.

Glycerine Bid

Armour & Co., Chicago, was the low bidder on 2,400 lbs. glycerine at \$436 in a recent opening by the Veterans Administration Procurement Div., Washington, D. C.

Veterans Div. Bids

Merck & Co., Rahway, N. J., was the low bidder on 200 ctns. sodium fluoride at \$150 in a recent opening by the Veterans Procurement Div., Washington, D. C. In another opening, James Good, Inc., was low on 800 tins soap at 79c.

Army Qtm. Awards

In a recent opening by the Army Ordnance Supplies, San Antonio Arsenal, Texas, Gulf Oil Corp., Houston, Texas, was awarded a con-

tract for 1,000 pts. liquid polish at \$212.50. In the same opening, Swift & Co., Ft. Worth, Texas, was awarded a contract for 5,000 lbs. castile soap at \$781.50.

Sweeping Compound Award

In a recent opening by the Army Quartermaster Corps, Ft. Knox, Ky., Enterprise Paper Co., Phila., was awarded a contract for 9,000 lbs. floor sweeping compound at 2.145c.

Metal Cleaner Award

Graham Industrial Supply Co., Lodi, N. J., was awarded a contract for 20,000 lbs. metal cleaner at 8.44c in a recent opening the Army Ordnance Supplies, Picatinny Arsenal, N. J.

Navy Soap Bid

Procter & Gamble Dist. Co., New York, was low on 125,000 lbs. salt water soap at 6.08c lb. in a recent opening by the Navy Purchasing Office, New York.

Polish Compound Bid

In a recent opening by the Army Air Corps, Wright Field, O., S. C. Johnson & Son, Racine, Wisc., was low on 5,000 lbs. polishing compound at 9.75c.

Treasury Bids

In a recent opening by the Treasury Dept., Washington, D. C., Sentry Products, Boston, submitted the low bid on 33,000 gals. toilet soap at 27.4c.

Air Corps Awards

In a recent opening by the Army Air Corps Supplies, Wright Field, O., the following contracts were awarded: Chemical Mfg. & Dist. Co., Easton, Pa., 1,500 cans scouring powder at 3.53c, 7,500 cans at 3.84c, 6,000 cans at 5.29c, 2,000 cans at

4.32c and 2,000 cans at 5.64c; Turco Prods., Los Angeles, 6,500 cans scouring powder at 4.96c; Newell Gutrad Co., San Francisco, 105,000 cakes grit hand soap at 2.6c; Harley Soap Co., Phila., 3,000 gals. liquid hand soap at 38c and 2,000 gals. at 45c; Colgate-Palmolive-Peet, Jersey City, 1,000 gals. liquid hand soap at 50c; Swift & Co., Chicago, 49,000 pkgs. soap powder at 8.833c and 2,000 pkgs. at 11.25c; Sterlus Soap Co., Bklyn., 3,000 pkgs. soap powder at 10c; National Soap Co., 695,000 lbs. soft soap at 7.22c.

Toilet Soap Bid

U. S. Soap Co., Media, Pa., submitted the low bid on 14,000 lbs. toilet soap at 12.9c in a recent opening by the Treasury Procurement Div., Washington, D. C.

Keefe Buys Rainier Mine Co.

D. J. Keefe, former owner of Keefe Chemical Co., Boston, recently purchased Rainier Mine Co., same city, producer of "Rainier Natural Soap" and "Rainier Natural Powder," which products have been on the market for 40 years. According to Mr. Keefe, the products of the company are still being produced, and will be available to the wholesale and retail trade, under the new management, after February 1st. While "Rainier Natural Soap" is still being manufactured at Rainier, Oregon, as always, the business office of the company is at 2503 Washington St., Boston. Keefe Chemical Co., which manufactured "Silver Label Brand Germicide," was purchased last summer by A. S. Boyle Co., Jersey City, which company continues to manufacture the product.

Lever Loses Coconut Oil

The Vancouver office of Lever Brothers, Ltd., recently reported that the firm lost a shipment of 80 tons of coconut oil at Hong Kong. The firm is now depending on New Guinea copra, it is said, which is processed at the Carpenter plant at Vancouver, although that source is also threatened.



1942!

A NEW YEAR
A NEW IDEA

Until you have seen our PRICE LIST for 1942 you have missed the latest development in the editing of price lists throughout the history of our industry.

You should receive your copy during January. Please advise us if it does not reach you.

George Lueders & Co.

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Perfume Materials • Colors

NEW TRADE MARKS

The following trade-marks were published in the January issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

GLASCOTE—This in solid letters describing auto polish. Filed by Glascote Co., Denver, Oct. 4, 1941. Claims use since July 1, 1941.

R—This in large outline letters describing moth-proofing compound. Filed by Zonite Prods. Corp., New York, Oct. 13, 1941. Claims use since Aug. 13, 1941.

LARVEX—This in solid letters superimposed over the letter "R" describing moth-proofing compound. Filed by Zonite Prods. Corp., New York, Oct. 13, 1941. Claims use since Aug. 13, 1941.

LUBKLEEN—This in solid letters describing machinery cleaner. Filed by West Disinfecting Co., Long Island City, N. Y., Oct. 28, 1941. Claims use since Aug. 7, 1941.

PRE-KLEANO—This in solid letters describing pre-cleaning preparation. Filed by Rinshed-Mason Co., Detroit, Oct. 17, 1941. Claims use since Aug. 22, 1941.

TABU—This in solid letters describing soap. Filed by James L. Younghusband, Chicago, Nov. 8, 1941. Claims use since Dec. 10, 1932.

NSC—This in solid letters describing cleaner. Filed by Niagara Smelting Corp., Niagara Falls, N. Y., Mar. 22, 1941. Claims use since June 29, 1939.

CREOPHEN—This in shaded letters describing disinfectant. Filed

by John Carle & Sons, N. Y., Aug. 7, 1941. Claims use since May 1, 1905.

PEDWELL—This in solid letters describing athlete's foot preparation. Filed by Delrose Laboratory, Morton Grove, Ill., Aug. 22, 1941. Claims use since June 15, 1941.

SULFASUXIDINE—This in solid letters describing bactericides. Filed by Sharp & Dohme, Phila., Nov. 12, 1941. Claims use since Nov. 5, 1941.

STERILOPE—This in solid letters describing bacteriostatic preparation. Filed by Abbott Labs., North Chicago, Ill., Nov. 24, 1941. Claims use since Oct. 28, 1941.

E-Z-GLOW—This in solid letters describing wax polish. Filed by Stanley Home Products, Westfield, Mass., Jan. 10, 1941. Claims use since Sept. 5, 1933.

WAXIDE—This in solid letters describing auto polish. Filed by Flare Labs., Chicago, Oct. 23, 1941. Claims use since Jan. 15, 1939.

SOLAGRAPH—This in solid letters describing floor dressing. Filed by Masury-Young Co., Charlestown, Boston, Nov. 1, 1941. Claims use since Sept. 24, 1941.

PINE BUDS—This in solid letters inside circle above illustration of pine tree describing soap. Filed by Hewitt Soap Co., Dayton, Mar. 28, 1941. Claims use since Jan. 1, 1937.

SANITONE D—This in solid letters describing detergent. Filed by Emery Industries, Cincinnati, May 12, 1941. Claims use since 1933.

SANITONE S—This in solid letters describing detergent. Filed by Emery Industries, Cincinnati, May 12, 1941. Claims use since 1937.

WETSO—This in solid letters describing tall oil soap. Filed by West Virginia Pulp & Paper Co., New York, Sept. 20, 1941. Claims use since Mar. 8, 1939.

AUNT DINAH—This in solid letters describing chemical polish cloths. Filed by Auto Supplies Mfg. Co., Denver, Oct. 27, 1941. Claims use since Oct., 1936.

CHARLAB—This in outline letters describing washing powder. Filed by Charlotte Chemical Labs., Charlotte, N. C., Nov. 15, 1941. Claims use since May 2, 1938.

MAR-BEL—This in outline letters describing soap. Filed by Cosmata, Inc., Long Island City, N. Y., Nov. 19, 1941. Claims use since Sept. 16, 1941.

KONTAKT—This in solid letters describing saponifiers. Filed by Emery Industries, Cincinnati, May 12, 1941. Claims use since 1915.

GUILD—This in solid letters describing mouth wash. Filed by Drug Guild, Inc., New York, Aug. 5, 1941. Claims use since Oct. 1937.

ZINBORSAL—This in solid letters describing antiseptic preparation. Filed by Rigidest Prods., Chicago, Oct. 13, 1941. Claims use since June 1, 1940.

PHENOBOLE—This in solid letters describing animal antiseptic. Filed by American Chemical Co., Chicago, Nov. 17, 1941. Claims use since Nov., 1940.

BENFU—This in solid letters describing shampoo. Filed by Benfu Lotion Co., New York, Dec. 5, 1941. Claims use since Nov. 1, 1941.

SILV-ALL—This in solid letters describing silver polish. Filed by J. C. Stalford & Sons, Baltimore, Oct. 21, 1941. Claims use since Jan., 1935.

COSMASUL—This in solid letters describing soap. Filed by Cosmata, Inc., Long Island City, N. Y., Nov. 29, 1941. Claims use since Oct. 21, 1941.

Trade Marks Granted

391,951. Polishes. Wilkwise Labs., Bklyn. Filed June 9, 1941. Serial No. 444,322. Published Sept. 23, 1941. Class 4.

391,961. Flea powder and pine oil disinfectant. Polk Miller Prods. Corp., Richmond, Va. Filed June 17, 1941. Serial No. 444,609.



Scarcity of floral oils . . .

Present dwindling supplies of natural floral essences emphasize the value of high quality substitutes.

Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products,—toilet soaps, shampoos, shaving creams, powders, creams, and many others.

In fact, in many products the newer synthetic floral essences are to be *preferred* for the manner in which they reproduce the true fragrance of the living flowers in the finished product,—not to mention uniformity of quality and odor fidelity, and their economy under present conditions.

Let us tell you more about these newer substitutes as an answer to the growing scarcity of natural floral oils.

NORDA Essential Oil and Chemical Co., Inc.

Chicago Office
325 W. Huron St.

Los Angeles Office
2800 E. 11th Street

St. Paul Office
253 E. 4th St.

Toronto Office
119 Adelaide St., W.

New York Office
601 West 26th St.

Montreal Office
135 Commissioners St., W.

Published Sept. 16, 1941. Class 6.

391,967. Insecticides. Sherwin-Williams Co., Cleveland. Filed June 25, 1941. Serial No. 444,839. Published Sept. 23, 1941. Class 6.

391,995. Disinfectants. Alba Pharmaceutical Co., N. Y. Filed July 19, 1941. Serial No. 445,483. Published Sept. 23, 1941. Class 6.

391,998. Tooth Powder. S. S. White Dental Mfg. Co., Phila. Filed July 19, 1941. Serial No. 445,511. Published Sept. 16, 1941. Class 6.

392,030. Pest control preparations. Johnson Ant Control, Oakland, Calif. Filed Aug. 4, 1941. Serial No. 445,946. Published Sept. 23, 1941. Class 6.

392,105. Soap. Hemphill-Miller, Tucson, Ariz. Filed July 7, 1941. Serial No. 445,154. Published Sept. 30, 1941. Class 4.

392,109. Rug cleaning powder. Von Schrader Mfg. Co., Racine, Wisc. Filed July 14, 1941. Serial No. 445,348. Published Sept. 30, 1941. Class 4.

392,112. Hand soap and shaving soap. John Hudson Moore, Inc., N. Y. Filed July 17, 1941. Serial No. 445,432. Published Sept. 30, 1941. Class 4.

392,176. Cleaner. Chemicals, Inc., San Francisco. Filed Sept. 21,

1940. Serial No. 436,204. Published Nov. 19, 1940. Class 4.

392,195. Cleaners. Penna. Salt Mfg. Co., Phila. Filed May 7, 1941. Serial No. 443,341. Published Oct. 7, 1941. Class 4.

392,355. Insecticides. De-struxol Corp., Pasadena, Calif. Filed May 21, 1941. Serial No. 443,751. Published Oct. 7, 1941. Class 6.

392,367. Insect Spray. Superior Petroleum Co., Louisville, Ky. Filed June 19, 1941. Serial No. 444,692. Published Sept. 30, 1941. Class 6.

392,392. Radiator Cleaner. American Oil Co., Baltimore. Filed July 29, 1941. Serial No. 445,710. Published Oct. 7, 1941. Class 6.

392,411. Germicide. R. & J. Chemical Co., Wilmette, Ill. Filed Aug. 4, 1941. Serial No. 445,944. Published Oct. 7, 1941. Class 6.

392,418. Insecticides. Jaygol Prods. Corp., New York. Filed Aug. 8, 1941. Serial No. 446,082. Published Sept. 30, 1941. Class 6.

392,432. Insecticides. General Chemical Co., New York. Filed Aug. 26, 1941. Serial No. 446,543. Published Oct. 14, 1941. Class 6.

392,435. Surgical Cleanser. Frank Nau, Portland, Ore. Filed Aug. 30, 1941. Serial No. 446,705.

Published Oct. 14, 1941. Class 6.

392,468. Polish. Twin City Shellac Co., Brooklyn. Filed June 14, 1937. Serial No. 394,065. Published Oct. 18, 1938. Class 16.

392,523. Soap. Hewitt Soap Co., Dayton, O. Filed Aug. 8, 1941. Serial No. 446,079. Published Oct. 21, 1941. Class 4.

392,643. Cleanser. Knomark Mfg. Co., Brooklyn. Filed Aug. 1, 1941. Serial No. 445,849. Published Oct. 28, 1941. Class 4.

392,659. Animal repellent. Comfort Mfg. Co., Chicago. Filed Aug. 11, 1941. Serial No. 446,130. Published Oct. 21, 1941. Class 6.

392,683. Dentifrice. Mack Dental Co., Monterey, Calif. Filed Sept. 9, 1941. Serial No. 446,921. Published Oct. 21, 1941. Class 6.

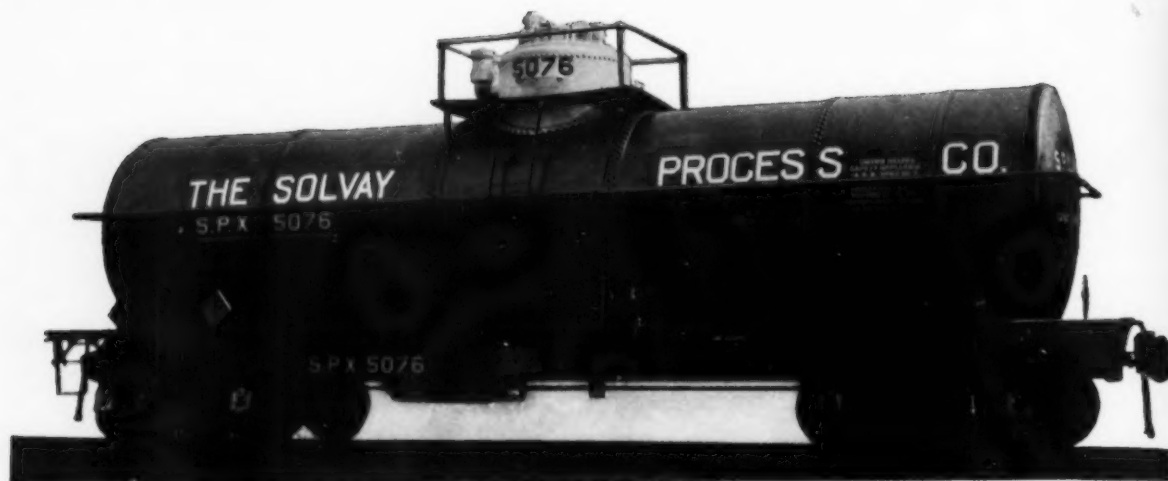
392,710. Wash cubes. National Chemical Co., Detroit. Filed Feb. 5, 1940. Serial No. 428,248. Published Nov. 4, 1941. Class 4.

392,741. Cleaner. Snap Chemical Co., Chicago. Filed Mar. 25, 1941. Serial No. 441,928. Published Nov. 4, 1941. Class 4.

392,753. Detergent. National Home Prods., New York. Filed Apr. 26, 1941. Serial No. 443,012. Published Nov. 4, 1941. Class 4.

Sales representatives and executives of Magnus, Mabee & Reynard, photographed at the concluding dinner of the annual M. M. & R. sales convention held at the Hotel Warwick, New York. Among outside speakers to address the gathering of 56 salesmen and executives was Billy B. Van, former head of Pine Tree Products Co. Above right are the three Magnus brothers: left, J. B. Magnus, vice-president; center, Percy C. Magnus, president; and right, R. B. Magnus, vice-president.





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1101 Hibernia Building	New Orleans, La.
40 Rector Street	New York, N. Y.
12 South 12th Street	Philadelphia, Pa.
1107 Gulf Building	Pittsburgh, Pa.
3615 Olive Street	St. Louis, Mo.
Milton Avenue	Syracuse, N. Y.



As of January 28, 1942

NEW YORK—The revision of general preference order M-71, eliminating the 90-day inventory restriction on processing of fats and oils, which was issued January 24th, gave relief to a situation which had concerned manufacturers of soap and sanitary products since the original order was issued December 29. The original order prohibited processors of fats and oils from receiving deliveries which would bring their total inventories to a figure above a 90-day operating supply. As revised by the OPM (succeeded by the WPB: War Production Board), the order prohibits a processor of fats and oils from producing more of his product, soap, for example, than is required to fill his orders and to give him a "practicable minimum working inventory." It does not, however, restrict the acquiring of oil and fat inventories. The question of further stock control is left fairly indefinite, but states that the control powers already possessed by WPB over the distribution and use of fats and oils will be exercised, if and when any shortage should occur. Processors believe that they may now buy far ahead and contract for more than 90-days' requirements if they are accustomed to buy in this way and if no scarcity threatens the oil or fat in question. The order is to be effective until July 31, 1942.

Another development of the month, of importance to manufacturers of soap and sanitary chemicals, was the placing of copra, coconut oil and palm oil, as well as rapeseed and tung oils, under general import control order M-63. Under the order, no one may import

the listed strategic materials except under authorization from the U. S. government, and the private owner or consignee of such materials imported after the effective date may not dispose of his interest in them or process them. Change of location, except to the port of entry and from the port of entry to the place of storage is also forbidden.

The OPA allowed producers of borax to advance the price \$2 per ton on January 29. The advance had been held off voluntarily since the end of December while the OPA studied the justification for the increase. Boric acid was advanced \$3 per ton the same date.

Prices of essential oils continued to show an upward trend throughout the month. Insecticide materials, including pyrethrum powder, pyrethrum extract and red squill, were also advanced to a higher level than a month ago.

Animal Fats

Late in the month, both tallow and grease prices were advanced to the ceiling levels, based on the prices of October 1st, 1941, after having been priced below ceiling levels for most of the month. Current prices are as follows: extra

loose tallow, 9.71 $\frac{1}{8}$ cents a pound; special tallow, 9.57 $\frac{1}{4}$ cents a pound, fob.; yellow house grease, 9.29 $\frac{5}{8}$; white grease, 9.71 $\frac{1}{4}$ cents a pound.

Vegetable Oils

Nominal conditions prevail in the markets for coconut oil, copra and palm oil in absence of offerings due to the fact that these items have been added to the general import order M-63, which states that these materials imported after the effective date may not be disposed of without permission of the director of priorities. Prices of domestically produced vegetable oils are currently above the prices quoted a month ago. At that time oil and fat prices were subject to a ceiling based on November 26, 1941 prices, but on January 1st, the ceiling basis was changed to October 1, 1941. The change of the base date had the effect of raising the price ceiling by about 11 per cent.

Chlorthymol Cresol Alternate

Chlorthymol can be used to replace cresol, phenol or formaldehyde in products used to kill *Staphylococcus Aureus*, according to L. M. Roeg of Merck & Co., Rahway, N. J., in a recent report before the scientific section of the Proprietary Association. He warns that it is first necessary to determine the compatibility of chlorthymol with the other ingredients.

FWDA To Meet 2-3-4

The mid-year meeting of the Federal Wholesale Druggists' Association is to be held February 2-3-4 at the Hotel Pennsylvania, New York. An important part of the three-day meeting is to be a discussion period on raw materials and consumer goods.

CEIL CARBON TET, AC. OXALIC

Ceiling prices for carbon tetrachloride were established in price schedule No. 79 issued January 29, by the Office of Price Administration, to become effective February 2. The schedule fixes the maximum prices for quantities of 5 gallons or more at the current levels. Maximum prices in Zone 1 are 73 cents a gallon in carload lots in 50-55 gallon drums, and 80 cents a gallon in less than carload lots. On the same date, price schedule No. 78 for oxalic acid was issued by the OPA establishing a price of 11 $\frac{1}{4}$ cents a pound, f.o.b. producer's shipping point, for the material in 100 pound lots or more.

GUAIACWOOD OIL

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and ships a pure oil of exceptionally light color.



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RAW MATERIAL

PRICES

(As of January 28, 1942)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C.P., drums	lb.	\$.08½	\$.09
Acid, Boric, bbls., 99½%	ton	106.00	128.00
Cresylic, drums	gal.	.81	.86
Low boiling grade	gal.	.81	.86
Muriatic, C. P., carboys	lb.	.08	—
Oxalic, bbls.	lb.	.11¼	.14¼
Adeps Lanae, hydrous, drums	lb.	.32	.34
Anhydrous, drums	lb.	.33	.35
Alcohol, Ethyl, drums	gal.	8.19	8.25½
Complete Denat., SD1, dms., ex. gal.	gal.	.60	.65
Alum. Potash lump, bbls.	lb.	.04½	—
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., drums	lb.	.08¼	.09¼
Bentonite	ton	25.00	51.00
Bleaching Powder, drums	100 lb.	2.25	3.35
Borax, pd., bbls., bags	ton	50.00	75.00
Carbon Tetrachloride, car lots	gal.	.73	1.17
L. C. L.	gal.	.80	1.27
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	7.60	16.00
Cresol, U.S.P., drums	lb.	.11	.11¼
Creosote Oil	gal.	.141	.15¼
Feldspar, works	ton	30.00	35.00
Formaldehyde, bbls.	lb.	.05%	.07¼
Fullers Earth	ton	8.50	15.00
Glycerine, C.P., drums	lb.	.18¼	.19¼
Dynamite, drums	lb.	.18¼	.18¼
Saponification, drums	lb.	.12¼	.14¼
Soap lye, drums	lb.	.11½	—
Hexalin, drums	lb.	.23	—
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	ton	6.25	13.00
Mercury Bichloride, drums	lb.	2.24	2.39
Naphthalene, ref. flakes, bbls.	lb.	.08	—
Nitrobenzene (Mirbane) drums	lb.	.08	.09
Orthodichlorbenzene	lb.	.07½	.08½
Paradichlorbenzene, drums	lb.	.13	.15
Petrolatum, bbls. (as to color)	lb.	.03½	.08
Phenol (Carbolic Acid) drums	lb.	.12½	.14¼
Pine Oils, drums	gal.	.74	1.10
Potash, Caustic, solid	lb.	.06¼	.06¼
Flake, 88-92%	lb.	.07	.07¼
Liquid, 45% basis	lb.	.02½	.03¼
Potassium Carbonate, solid	lb.	.06½	.06¼
Liquid	lb.	.03	.03¼
Pumice Stone, coarse	lb.	.03½	.04¼
Rosins (net wt., ex dock, New York)—			
Grade D to H	100 lb.	3.84	3.88
Grade I to N	100 lb.	3.88	4.12
Grade WG to X	100 lb.	4.83	4.95
Wood, ex. dock	100 lb.	3.12	4.03
Rotten Stone, dom., bags	lb.	.02½	.04
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04¼	.04¼
Olive Castile, bars	lb.	.28	.38
Olive Castile, powder	lb.	.33	.40
Powdered White, Neutral	lb.	.18	.24

Olive Oil Foot, bars, 68-70%	lb.	—	—
Green, U.S.P.	lb.	.09	.10
Tallow Chips, 88%, car lots	lb.	.10½	.11¼
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.05	1.45
Car lots, in bulk	100 lb.	.90	.95
Soda Caustic, cont., wks., solid	100 lb.	2.30	—
Flake	100 lb.	2.70	2.95
Liquid, tanks, 47-49%	100 lb.	1.92½	1.95
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	14.20	18.00
Sodium Fluoride, bbls.	lb.	.08	.09¼
Sodium Hydrosulfite, bbls.	lb.	.17	.18
Sodium Metasilicate, anhyd.	100 lb.	4.00	5.30
Granulated	100 lb.	2.50	3.55
Sodium Pyrophosphate	100 lb.	5.25	6.80
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.27½	.33¼
Triethanolamine	lb.	.18	.20
Trisodium Phosphate, bags, bbls.	100 lb.	2.70	4.30
Zinc Oxide, lead free	lb.	.07¼	.07¼

Oils — Fats — Greases

Babassu, tanks, futures	lb.	—	Nom.
Castor, No. 1, bbls.	lb.	—	.13¼
No. 3, bbls.	lb.	—	.13
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	—	Nom.
Tanks, Pacific Coast, futures	lb.	—	Nom.
Copra, bulk, coast	lb.	—	Nom.
Corn, tanks, West	lb.	.12¼	.12¼
Cottonseed, crude, tanks, mill	lb.	.12¼	.12¼
PSY, futures	lb.	—	—
Fatty Acids—			
Corn Oil, tanks, Chicago	lb.	.15	.15¼
Coconut Oil, tanks, Twitchell, Chi.	lb.	.17½	.17¼
Cotton Oil, tanks, Chicago	lb.	.14¼	.14¼
Settled soap stock, Chicago	lb.	.03¼	.04
Boiled soap stock, 65%, Chi.	lb.	.04¼	.05
Foots, 50%, Chicago	lb.	.03¼	.04
Red Oil, bbls., dist. or sapon.	lb.	.12¼	.13¼
Tanks	lb.	.11¼	.12
Stearic Acid, saponif.			
Double pressed	lb.	.14¼	.15
Triple pressed	lb.	.17½	.17¼
Greases, choice white, tanks	lb.	.0971¼	—
Yellow	lb.	.0929¼	—
Lard, city, tubs	lb.	.11¼	.12
Linseed, raw, bbl.	lb.	.1150	.1250
Tanks, raw	lb.	.1060	.1080
Olive, denatured, bbls., N. Y.	gal.	4.40	4.50
Foots, bbls., N. Y.	lb.	.19	Nom.
Palm, Sumatra, cif. New York, Tanks	lb.	—	—
Palm, kernel, f.o.b. San F.	lb.	—	Nom.
Peanut, crude, tanks, mill	lb.	.13	—
Soya Bean, domestic, tanks, crude	lb.	.11¼	Nom.
Stearin, oleo, bbls.	lb.	.10	.10¼
Tallow, special, f.o.b. N. Y.	lb.	.0957¼	—
City, ex. loose, f.o.b. N. Y.	lb.	.0971¼	—
Teased Oil, crude	lb.	.30	Nom.
Whale, refined	lb.	.1070	Nom.



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3005

(As of January 28, 1942)

Essential Oils

Almond, Bitter, U.S.P.	lb.	\$3.50	\$3.75
Bitter, F.F.P.A.	lb.	4.75	5.00
Sweet, cans	lb.	2.45	2.50
Anise, cans, U.S.P.	lb.	2.30	2.35
Bay, 55-66% phenols, cans	lb.	1.65	1.70
Bergamot, coppers	lb.	32.00	Nom.
Artificial	lb.	2.75	9.25
Birch Tar, rect., cans	lb.	—	—
Crude, cans	lb.	—	—
Bois de Rose, Brazilian	lb.	4.50	4.75
Cayenne	lb.	—	—
Cade (juniper tar), cans	lb.	.80	.95
Cajeput, tech, drums	lb.	1.75	Nom.
Calamus, cans	lb.	—	—
Camphor, Sassy, drums	lb.	.40	Nom.
White, drums	lb.	.43	Nom.
Cananga, native, cans	lb.	14.00	15.00
Rectified, cans	lb.	15.00	16.00
Caraway Seed	lb.	15.00	Nom.
Cassia, Redistilled, U.S.P.	lb.	10.50	Nom.
Cedar Leaf, cans	lb.	1.10	1.40
Cedar Wood, light, drums	lb.	.75	Nom.
Citronella, Java, drums	lb.	1.20	Nom.
Citronella, Ceylon, drums	lb.	1.05	Nom.
Clove, U.S.P., cans	lb.	1.60	1.70
Eucalyptus, Austl., U.S.P., cans	lb.	.75	.80
Fennel, sweet, cans	lb.	2.50	2.75
Geranium, African, cans	lb.	17.00	Nom.
Bourbon, cans	lb.	17.00	Nom.
Turkish (Palmarosa)	lb.	5.25	5.50
Hemlock, cans	lb.	.95	1.15
Lavender, 30-32% ester, cans	lb.	—	—
Spike, Spanish, cans	lb.	2.85	3.10
Lemon, Ital., U.S.P.	lb.	5.50	Nom.
Cal.	lb.	3.25	—
Lemongrass, native, cans	lb.	3.25	Nom.
Linaloe, Mex., cases	lb.	3.50	3.75
Nutmeg, U.S.P., cans	lb.	3.00	3.25
Orange, Sweet, W. Ind., cans	lb.	4.75	6.00
Italian cop	lb.	8.00	Nom.
Distilled	lb.	1.70	—
California, expressed	lb.	3.00	—
Origanum, cans, tech	lb.	2.85	2.90
Patchouli	lb.	5.50	6.00
Pennyroyal, dom.	lb.	2.50	2.65
Imported	lb.	2.40	2.50
Peppermint, nat., cans	lb.	6.00	6.25
Redis., U.S.P., cans	lb.	6.50	6.75
Petitgrain, S. A., cans	lb.	1.70	1.75
Pine Needle, Siberian	lb.	2.60	2.70
Rosemary, Spanish, cans	lb.	1.85	1.90
drums	lb.	1.80	1.85
Sandalwood, dom., dist., U.S.P.	lb.	5.85	6.00
Sassafras, U.S.P.	lb.	1.05	1.20
Artificial, drums	lb.	—	—
Spearmint, U.S.P.	lb.	3.25	3.50
Thy.ne, red, N. F.	lb.	1.85	2.20
White, N. F.	lb.	1.95	2.35
Vetiver, Java	lb.	28.00	Nom.
Ylang Ylang, Bourbon	lb.	20.00	24.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	\$1.55	\$1.60
Amyl Cinnamic Aldehyde	lb.	1.90	2.00
Anethol	lb.	1.20	1.35
Benzaldehyde, tech.	lb.	.45	Nom.
N. F. VI	lb.	.85	.95
Benzyl, Acetate	lb.	.59	Nom.
Alcohol	lb.	.63	.75
Citral	lb.	4.50	5.50
Citronellal	lb.	3.50	Nom.
Citronellol	lb.	3.70	Nom.
Citronellyl Acetate	lb.	—	Nom.
Coumarin	lb.	2.75	3.25
Diphenyl oxide	lb.	.43	.50
Eucalyptol, U.S.P.	lb.	1.50	1.60
Eugenol, U.S.P.	lb.	2.75	2.80
Geraniol, Soap	lb.	1.10	1.50
Other grades	lb.	1.50	3.50
Geranyl Acetate	lb.	—	—
Heliotropin	lb.	4.00	4.10
Hydroxycitronellal	lb.	—	—
Indol, C. P.	lb.	28.00	30.00
Ionone	lb.	2.75	3.95
Isoborneol	lb.	.90	1.07
Iso-bornyl acetate	lb.	.80	.95
Iso-Eugenol	lb.	3.15	4.25
Linolool	lb.	6.50	7.50
Linylal Acetate	lb.	5.50	Nom.
Menthol, natural	lb.	14.00	16.00
Synthetic, U.S.P.	lb.	—	—
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	—	—
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.35	.40
Musk Ambrette	lb.	3.85	4.20
Ketone	lb.	3.90	4.35
Xylol	lb.	1.15	1.55
Phenylacetaldehyde	lb.	5.00	Nom.
Phenylacetic Acid	lb.	1.85	Nom.
Phenylethyl Alcohol	lb.	2.10	2.50
Rhodinol	lb.	30.00	35.00
Safrol	lb.	1.60	1.75
Terpineol, C.P., drs.	lb.	.33	—
Cans	lb.	.36	—
Terpinyl Acetate, 25 lb. cans	lb.	.74	—
Thymol, U.S.P.	lb.	3.00	—
Vanillin, U.S.P.	lb.	2.35	2.75
Yara Yara	lb.	1.80	1.85

Insecticide Materials

Insect Powder, bbls.	lb.	.25	.26
Pyrethrum Extract			
5 to 1	gal.	1.25	1.30
20 to 1	gal.	4.70	4.80
30 to 1	gal.	7.00	7.15
Derris, powder—4%	lb.	.35	.39
Derris, powder—5%	lb.	.38	.42
Cube, powder—4%	lb.	.33	.36
Cube, powder—5%	lb.	.36	.39
Squill, red, dried	lb.	.78	.85

Waxes

Bees, white	lb.	.58	.60
African, bgs.	lb.	.49	.50
Refined, yel.	lb.	.55	.56
Candelilla, bgs.	lb.	.33	.35
Carnauba, No. 1, yellow	lb.	.88	.89
No. 2, N. C.	lb.	.83	.84
No. 3, Chalky	lb.	.76	.77
Ceresin, yellow	lb.	.13½	.18
Montan Wax, bags	lb.	.45	.46
Paraffin, ref., 125-130	lb.	.0520	.0560

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PRODUCTION

SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, Oil & Fat Industries.

Glycerine From Potash Soaps?

TO recover glycerine in the manufacture of potash soaps is not feasible even under war-time conditions. To wipe out many manufacturing units of the potash soap industry in an effort to obtain the last small percentage of glycerine now remaining in the soap would do many times more harm to our defense program than the value of the glycerine which might thus be recovered. These are the conclusions of Herbert Kranich, president of the Kranich Soap Co., Brooklyn, in a recent discussion of the situation in which the small manufacturer of potash soaps finds himself today. Mr. Kranich stated:

"Glycerine recovery for the average small soap manufacturer has never been feasible, practical, or economical. Too many individuals associate the idea of glycerine with the manufacture of all soap products. Glycerine recovery is practical for approximately 80 per cent of the different kinds of soaps produced, such as toilet soap, bar, chip, laundry, milled and pure powdered products. However, this is not the case in manufacturing cold made, potash, dry cleaning and other specialty soaps.

In the light of the present glycerine situation, it is interesting to look

at the facts from a potash soap-maker's viewpoint. In order to do this, it is necessary first to determine, if possible, the maximum amount of glycerine that could be recovered from the amount of oils used by those who make these specialty potash products.

Assuming, (from a recent survey of potash soap manufacturers) a total annual production of these specialty soaps of approximately 100 to 120 million pounds of liquid and paste potash soaps, we find, using as a yard stick an average anhydrous content of 50 per cent, that substantially 50 or 60 million pounds of anhydrous soap are produced. Breaking this down, we arrive at an estimated tonnage of only 50 million pounds of vegetable oils used, if all of the raw materials are in the form of tri-glycerides. In the past and maybe at the present time, substantial quantities of fatty acids used instead of oils would tend to decrease the sum total estimated above. Based on this, we can assume the total tonnage of vegetable oils used as such in the manufacture of potash soaps to be approximately 40 million pounds.

A survey of firms manufacturing potash soaps leads to the conclusion that only a few units of the larger companies are equipped to

split fats and recover glycerine. These few units may possibly account for 20 per cent of the oils consumed in manufacturing all potash soaps. The balance of 80 per cent of the tonnage of oils used at the present time is purchased by approximately 150 or 200 small manufacturers whose plants are in the main, not equipped mechanically to recover glycerine.

Those in this latter group are faced with a difficult situation. The question immediately arises,—if one is eventually compelled to proceed with the installation of necessary mechanical units for this glycerine recovery, what is the possibility of procuring the necessary machinery and equipment? Where will we obtain steel storage tanks to hold 3 per cent to 6 per cent sweet-water? What are the chances of obtaining evaporators, filter presses, pumps, motors, boilers, etc.,—under what sort of priority can the necessary machinery be obtained? This problem alone, immediately presents all sorts of difficulties.

For the sake of argument, granted that we can obtain the machinery, would it be financially and economically sound for defense purposes for 50 to 80 small firms to invest in equipment where the total amount of glycerine to be recovered

could not warrant any capital outlay, especially when we figure that the maximum amount of glycerine that could possibly be recovered would not exceed $3\frac{1}{2}$ to 4 million pounds per year out of approximately 200,000,000 pounds now being produced by established units. This portion of recovery where the tonnage of glycerine is so small would be decidedly disadvantageous from any angle. Better to utilize the time, and man power of these small soap plants for other purposes of far more value to our defense needs.

It has been suggested that in eventual necessity, we small soap makers might have our oils processed by those who have the necessary equipment. Scanning this situation, one is confronted with the fact that his costs would mount at once to 10 per cent or 15 per cent over the straight raw material cost even with the value of the extracted glycerine deducted. In addition, if his products have been sold on an anhydrous soap basis, he will have to include in his products from 3 per cent to 7 per cent more anhydrous soap to replace lost glycerine and consequently his finished product will cost him from 10 per cent to 15 per cent additional above the fatty acid costs. So this suggested alternative would increase costs substantially from 30 per cent to 40 per cent.

Continuing this line of thought, leads to the threat that many of those now producing potash soaps may be forced out of business with possible discharge of employees, idle plants, and unused capital due to inadequate equipment to split fats and oils. Inasmuch as the products of these small soap specialty plants, strategically scattered about the country, are vitally needed in many ways in the upkeep and maintenance of efficiency of literally thousands of defense plants, every effort should be made to keep them operating. Their value to our defense production is far greater in their present form than the glycerine which might be recovered from the comparatively small tonnage of oils which they consume.

American Home Survey

The *American Home* magazine recently conducted a drug and cosmetic survey among its readers to determine their brand buying habits, frequency of purchase, the price paid, use by age of purchaser, place of purchase of various items such as

soaps, shampoos, dentifrices, cosmetics, cleansing tissues and the like. A 66-page report summarizes the findings of the report. Nearly 2,000 questionnaires were filled in and returned for tabulating. Statistics of the National Resources Committee are also included in the report.

Revise Auto Soap Specs

A new specification for Automobile, Floor, and General Cleaning Soap, Fed. Spec. P-S-598, recently issued by the director of procurement to supersede Fed. Spec. P-S-612, includes two types of soap—a liquid type, Type I., as well as the old paste type, now known as Type II. General requirements for Type I are as follows: the material shall be uniform liquid soap made solely from whole neutral vegetable oils and potash; it shall be soluble in soft water and when diluted with water shall act as a cleaner; it shall not contain any solvents or oils that will damage floor surfaces; the odor shall not be objectionable. Detail requirements for both types are listed in the table below.

Among the changes that have been made in specifications for the paste type are that the allowed free acid content, as oleic acid, has been raised from 0.1 per cent to 0.2 per

cent. The new specifications become effective March 1, 1942.

Propose Grit Soap Revision

A proposed revision of Fed. Spec. P-S-576 for grit hand soap was submitted late last month to manufacturers of the material, prior to its submission to the Federal Specifications Executive Committee. It was asked that comments or criticisms be sent in before February 19. The proposed revision differs from Fed. Spec. P-S-576 in that the hand soap specified is mildly perfumed, instead of unscented; in that a per cent maximum rosin content is allowed, instead of none; and in that minimums of 25 per cent anhydrous soap, 4 per cent glycerol and 4 per cent unsaponified saponifiable matter, and a maximum of 10 per cent unsaponified saponifiable matter are specified. It is also specified that the acid number of the mixed fatty acids prepared from the soap be not less than 212.

	Type I Liquid		Type II Paste	
	Minimum	Maximum	Minimum	Maximum
Moisture (toluol distillation method).....percent..	....	....	....	55
Total matter insoluble in alcohol.....percent..	....	0.5	....	1.0
Free alkali, calculated as potassium hydroxide (KOH).....percent..	....	.05	....	.1
Free acid, calculated as oleic acid.....percent..	....	.1	....	.2
Alkaline salts, calculated as potassium carbonate (K ₂ CO ₃).....percent..	....	.1	....	.2
Matter insoluble in distilled water.....percent..	....	.1	....	.2
Chloride, calculated as potassium chloride (KCL).....percent..	....	.3	....	.5
Unsaponified and unsaponifiable matter.....percent..	....	.4	....	.8
Anhydrous soap, calculated as potash soap.....percent..	20	....	43	....
Total sodium compounds, calculated as Na ₂ O percent..	....	.2	....	.5
Glycerol.....percent..	1.8	....	4	....
Iodine number (WIJS) of mixed fatty acids derived from the soap.....	100	150	100	150
Acid number of mixed fatty acids derived from the soap.....	195	205	195	205
Rosin.....	....	None	....	None
Sugar.....	....	None	....	None

Conserving Laundry Bleach

WITH chlorine bleach more and more difficult to obtain, the need for its conservation by the laundry man is apparent. Bleach can be reduced while maintaining first-grade laundering. First, great care should be taken to store the bleach in a cool place free from vapors of any kind. In making the 1 per cent bleach solution, contamination must be avoided.

Two quarts or less of a solution of bleach containing 1 per cent of available chlorine per 100 pounds of dry fabric has been recognized as satisfactory. A flat recommendation of a 50 per cent reduction in the amount of bleach used is made, which would mean preparation of a one-half per cent stock solution in place of a 1 per cent stock solution.

Most important is a good washing procedure to clean the fabrics before they reach the bleach,—based on the use of soft water, accurate water levels, controlled load sizes, controlled washing time, and proper soap and alkali concentrations. A wheel rated at 300 pounds will produce much better results if loaded to 250-275 pounds, as has been proved by experience.

Bleaching at a temperature of 155-160° F. at a pH of 10.4-10.8 will insure maximum results from the bleach bath. A lower alkalinity tends to allow the bleach to decompose too rapidly, while a pH in excess of 10.8 reduces the bleaching action. Although subject to some variation with different alkaline builders, in the main this recommendation is dependable.

Temperatures on the suds bath on white work, after the first operation at 100° F. should be brought up as rapidly as possible to insure maximum detergent action. With some classes where stains which will be set are at a minimum, temperatures above 100° F. may be used on the break.

Perhaps a natural tendency will be to use more and stronger alkali to compensate for reduction in the quantity of bleach. Such a procedure can easily do more harm than good, since too much alkali causes graying of white work. Also it may cause precipitation of soil particles onto the fabrics, besides increasing the difficulty of rinsing.

Research has shown that optimum soil removal is obtained when the effective sodium oxide content (the common denominator of soap and alkalis) of the suds baths falls between 0.04 and 0.02 per cent. The higher values apply more specifically to the break or to the first suds, the lower values to subsequent suds. These limits apply to moderately soiled rather than to extremely soiled fabrics. Regardless of the type of builders used, the sodium oxide content of the break suds should be such that in the titration of 50 cc. of the wash liquor, not more than 5 cc. nor less than 3 cc. of 0.2 Normal sulfuric acid should be used, with methyl orange as indicator. The titration values should decrease on each successive step following the first operation, approaching the figure of 1.5 cc. on the bleach operation.

Virtual elimination of bleach on lightly soiled work is a possible necessity. The practice of bleaching only once or twice weekly work which is washed every day or every other day,—and then very lightly, has been followed by a number of laundries.

In the event that chlorine bleach is eliminated entirely from laundry use during the present national emergency, the choice of blue becomes highly important, since one function of bleach is to remove the last traces of blue. The blues on hand may be tested for removal by washing, by bluing white fabric to a deep shade, extracting and ironing dry, then washing without bleach. A few repetitions should demonstrate

whether the blue is suitable for use without bleach. If no bleach is used, the quantity of blue should be reduced by 50-75 per cent. The use of less blue will reduce the tendency for this color to build up in the fabrics. With good washing, the shortage of bleach need not prove an insurmountable problem. J. Fred Oesterling. *The Laundryman* Dec., 7-9 (1941).

Soap for Rayon

The Better Fabrics Testing Bureau and the U. S. Testing Co. have recently completed exhaustive tests on soaps for washing rayon. The rayon should be tested before washing for color fastness in plain water. If color runs, the material is not washable. If color-fast, the rayon should be washed in luke-warm suds prepared by making the suds with hot water, then adding cold water to give a luke-warm temperature. After careful washing, rinsing should be in clear luke-warm water. *Rayon Textile Mo.* 22, 755 (1941).

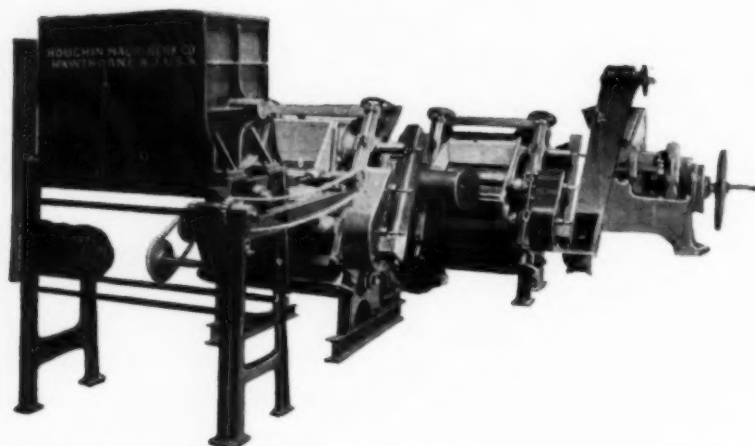
Foaming Properties of Soaps

In foaming properties, soaps made from rosins, modified rosins, and rosin acids were more like sodium laurate than the other individual fatty-acid soaps tested. Laurate soap foamed less than palmitate and myristate. Jell formation reduced the foaming power of the stearate soap. W. D. Pohle. *Oil & Soap* 18, 247-8 (1941).

COCONUT OIL REPLACEMENTS

What steps is the soap industry taking to remedy the deficiency of lauric acid-containing oils created by Japanese occupation of producing areas in the South Seas? Is any substantial quantity of coconut oil going to be available? If not what are the prospects of getting sufficient palm kernel oil or babassu oil to fill the gap? What of synthetic lauric acid? A review of the situation and an attempt to answer some of these pressing questions will be included in an article scheduled for our March issue.

Complete Unit for Milling and Plodding Toilet Soap



Capacity 1,000 lbs. per hour (once through.)

Unit consists of:

- One (1) Ideal Amalgamator, with motor.
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- One (1) 10"-Preliminary Plodder fitted with Screen.
- One (1) Three-Roll Chilled Iron Water Cooled Mill.
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- One (1) Conveying Screw with motor.
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- One (1) Automatic Bar and Cake Cutter. Unit operated by (2) 15-H.P.—(1) 10-H.P.—(1) 5-H.P.—(1) ½-H.P. Motors. Roller Chain Drives. Complete Weight 24,000-lbs. Floor Space 15-ft. x 21-ft.

* We have recently installed a unit for making 5,000-lbs. of Toilet Soap per hour, taking two bars at a time from the Plodder and Automatic Bar and Cake Cutter.

These units are only recommended for long runs of Soap. We will be pleased to give further particulars upon request.

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Laundry Problems

Most laundries use soft water and find their differentiating factor in the amount of bicarbonate alkalinity in the laundry water supply. A sufficiently accurate method for determining the amount of bicarbonate alkalinity present is to take a 25 cc. sample of the water and add three drops of methyl orange indicator solution, which gives the sample a pale yellow color. Add drop by drop 0.1 Normal hydrochloric acid until the color changes to a faint pink. Each drop is about equal to 0.05 cc., so that the number of drops of standard hydrochloric acid added gives an estimate of bicarbonate alkalinity; each drop or 0.05 cc. of 0.1 Normal hydrochloric acid being equivalent to 10 parts per million of bicarbonate alkalinity in terms of calcium carbonate. If 10 drops were required to cause the color change, approximately 100 parts per million as calcium carbonate are present. Tables are available which indicate the amount of soap and kinds and amounts of alkali to use with a water of this type, using the figure obtained for bicarbonate alkalinity.

To prevent damage to dyed cotton pieces, the alkalinity of the wash bath is best kept to about pH 11.0. With silks and woollens,—both sensitive to alkali, the pH is prefer-

ably kept to about 9.8. Colors suspected of being fugitive can be washed with a mild powdered olive soap without alkali, particularly if the pieces are not badly soiled. For low alkaline waters, a stock olive soap solution may contain one part of soap and two parts of modified soda. For waters carrying 200-300 parts per million or more of bicarbonate alkalinity, one part soap to three parts of soda ash are used.

Stubborn stains of oily and fatty matter may require application of red oil and kerosene. After the stains are well dissolved, the fabrics are washed in a reasonably strong alkali-soap solution to form soap in situ and so emulsify the grease. Usually with repeated sudsing the oil can be flushed away.

To remove solid fats or greases, temperatures of about 125° F. may be necessary. To remove salad oils—usually cottonseed oil—from table linen, strong alkalinities and high temperatures are required; if the fabrics will not stand heat and alkali, the washing job will not be very satisfactory. With a combination of albuminous and greasy stains, the first suds are run at low temperatures to dissolve the protein, the later suds at high temperatures to remove the grease. David I. Day. *Am. Perfumer* 43, Dec. 44-5 (1941).

Phosphate Study

Phosphates possess some of the most unusual properties found in any chemical family. Members chosen from the various phosphates varying in proportions of $\text{Na}_2\text{O}:\text{P}_2\text{O}_5:\text{H}_2\text{O}$ give solutions which may be strongly alkaline, mildly alkaline, neutral, mildly acid, and strongly acid, as illustrated by the electrometric titration curves for the sodium salts. The property of soluble glassy sodium phosphates of forming complexes with calcium and magnesium has been found of advantage in laundry and dishwashing operations, dairy and metal cleaning, and for household purposes. While not so widely used in the home as the older orthophosphate, the glassy phosphates are grad-

ually entering this field and may be expected to find ready acceptance, especially when mixed with more alkaline materials. Charles Schwartz and C. J. Munter. *Ind. Eng. Chem.* 34, 32-40 (1942).

Solvent Extraction of Oil

In solvent extraction, liquid of lower specific gravity is always maintained above liquid of higher specific gravity by keeping a stream of solvent flowing at first downward for a relatively short distance and then upward at a small angle to the horizontal, for a comparatively long distance. The solid to be extracted is moved countercurrent to the liquid. E. I. du Pont de Nemours & Co. British Patent No. 529,311.

Florida Coconut Oil

The oil of the plummy coconut (*Arecastrum Romanzoffianum*) growing in Florida, was examined to obtain information regarding a possible source of vegetable oil. The dried nut contain 8 per cent of oily kernel, which when dry, contains about 52 per cent of an oil somewhat similar to palm-kernel oil in properties, and having a saponification value of 239.5, Hanus iodine number of 28.4, and 0.41 per cent of unsaponifiable matter. The trees are rather scattered, which would make collection of the fruit difficult. G. N. Pulley and H. W. Von Loesbeck. *Oil & Soap* 18, 251-2 (1941).

Solubility of Calcium Soaps

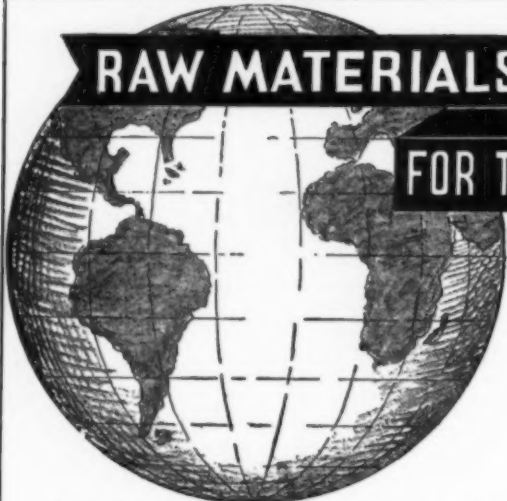
A study was undertaken to determine which of the calcium soaps would be likely to precipitate first when sodium soaps of fatty acids or of fatty acids and rosin, were added to hard water, and to compare the solubility of the calcium soaps of the rosin acids with those of the fatty acids. Solubilities as determined experimentally were as follows:

Calcium soap of	Mg. of Ca Soap in 100 cc. of solution at 50° C.
Longleaf pine rosin.....	63
Slash pine rosin.....	47
Oxidized rosin	100
d-Pimaric acid	19
Dehydroabietic acid	20
Abietic acid	39
Dihydroabietic acid	20
Tetrahydroabietic acid	10
Caprylic acid	310
Lauric acid	13
Myristic acid	9
Palmitic acid	7
Stearic acid	3
Oleic acid	32

Calcium oleate is much more soluble than calcium stearate. As the amount of hydrogen in the rosin acid molecule is increased, the solubility of the calcium soap is decreased. W. D. Pohle. *Oil & Soap* 18, 244-5 (1941).

Deterioration Retarders

To retard deterioration soaps and fatty oils are treated with a product of reaction of a phenol and a ketone such as *para*-dihydroxybenzene and acetone. United States Rubber Co. British Patent No. 531,218.



1838-1942

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Cocanut Oil	Peanut Oil	Lard Oils	Lanolin	Silicate Soda
Corn Oil	Perilla Oil	Neatsfoot Oil	Caustic Soda	Metasilicate
Cottonseed Oil	Rapeseed Oil	Oleo Stearine	Soda Ash	Tri Sodium Phosphate
Palm Oil	Sesame Oil	Stearic Acid	Caustic Potash	Di Sodium Phosphate
Palm Kernel Oil	Soya Bean Oil	White Olein	Carbonate Potash	Chlorphyll
Olive Oil	Teaseed Oil	Tallow	Sal Soda	Superfatting Agent

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PRODUCTS

AND PROCESSES

Soap in Sheet Form

A flexible self-sustaining water-soluble sheet having detergent properties contains soap as a major ingredient, and a hydrophilic polymerized vinyl compound such as a partial acetate of polyvinyl alcohol having a saponification number of 50-250. Chas. S. Rowe, to Canadian Industries Ltd. Canadian Patent No. 401,289.

Synthetic Fatty-Acid Soap

A soap preparation consists of water-soluble salts of synthetic fatty acids obtained from oxidation products of non-aromatic, high-molecular hydrocarbons. Also a normal quantity of builder from the group sodium carbonate, sodium silicate, and trisodium phosphate, is present. As a stabilizer sodium or ammonium pyrophosphate is included. Hans Beller and John J. Owen. Canadian Patent No. 401,714.

New Bleaching Compound

A new composition consists of a stable lithium hypochlorite bleach in the form of a solid containing 75 per cent or more of available chlorine, based on the total lithium compounds present calculated as anhydrous compounds. Karl E. E. Laue. The Solvay Process Co. Canadian Patent No. 401,539.

Soap Separation

A saponified mixture of high-molecular, oxidized, aliphatic hydrocarbons is first freed of unsaponified components in the usual way. It is then treated with a mixture of water and organic solvents such as alcohol or acetone. The undesirable carboxylic-acid salts such as those with more than 18 carbon atoms, do not dissolve and are filtered off. The ratio of water to organic solvent is 1:0.25

to 1:4, and is best ascertained by experiment. Emil Keuncke and Friedrich Becke, to I. G. Farbenind. A.-G. German Patent No. 702,143.

Stable Detergent

A salt such as alkali chloride or ammonium chloride or sulfate is added as a catalyst to a condensing mixture consisting of a phenol and a higher fatty alcohol. The mixture is heated to complete the condensation. The reaction product is treated with 2-3 times its weight of a sulfonating agent at a temperature below 25° C. The detergent resulting is resistant to acid, alkali and hard water. E. Watanabe and S. Kawamura. British Patent No. 530,415.

Shampoo Mixture

Particularly suitable for shampoo or toilet soap are mixtures of salts of technical sulfuric-acid esters of monoethanolamides of higher fatty acids, and salts of mixtures of mono- and dibutyl-naphthalene sulfonic acids. Such products have good lathering properties and are resistant to hard water. Sandoz Ltd. British Patent No. 529,040; through *Chem. Abs.*

Washing Agent

Sulfonic acids of high-molecular fatty-acid esters or amides, in which the sulfo group is not linked to the fatty acid group, are effective soap substitutes. They can be used by themselves or mixed with soap. I. G. Farbenindustrie A.-G. German Patent No. 701,642.

Soap Concentration Method

Aqueous soap solutions or aqueous solutions of other detergent materials are concentrated by conversion into a liquid-vapor mixture by heating in a tube or other suitable apparatus, and then injecting at a

high velocity into a free space so proportioned that the injected mixture gives off the whole of its vapor before it reaches the wall of the free space. N. V. de Bataafsche Petroleum Maatschappij. British Patent No. 531,359; through *Chem. Abs.*

Germicidal Detergent

Detergent and germicidal compositions are prepared by mixing a dry, stable calcium hypochlorite containing upward of 50 per cent of available chlorine with a synthetic, organic, water-soluble detergent of the class of fatty alcohol sulfates. The Mathieson Alkali Works. British Patent No. 530,040.

Clear Liquid Soap

Liquid soap is stabilized against clouding during storage of the soap in glass containers by adding to the soap solution a small proportion of a water-soluble hexameta-phosphate. Harry L. Roschen, to Industrial Patents Corp. Canadian Patent No. 401,851.

Cleaning Powder

A detergent composition contains trisodium phosphate, soda ash, sodium metasilicate, sodium sulfite and, if desired, sodium metaphosphate. Percival D. Liddiard. British Patent No. 528,964.

Stable Emulsion

An emulsion of water with a liquid immiscible with water can be stabilized with activated gelatinous alumina, prepared by boiling a precipitate of gelatinous alumina in water and ageing the same. T. W. Dickeson. Canadian Patent No. 401,730.

Sulfonate Production

Surface-active sulfonates are produced by the reaction of oil-soluble sulfonic acids derived from mineral oil, with more than one molar equivalent of an alkene oxide. John M. Hoffelman, to Shell Development Co. Canadian Patent No. 401,532.

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No. 2,264,372, Insecticide, patented December 2, 1941 by Mortimer T. Harvey, East Orange, N. J., assignor to Harvel Corp. In an insecticide, in combination, an insecticidal rotenone product, a petroleum oil and a phenol derived from the Anacardiaceae family of plants and having on its nucleus a long hydrocarbon chain substituent characteristic of an Anacardiaceae phenol, which the phenol is a common solvent for the rotenone product and the petroleum oil.

No. 2,265,155, Insecticide patented December 9, 1941 by Robert J. Geary, Blue Point, N. Y., assignor to Dow Chemical Co., Midland, Mich. An insecticidal composition comprising a substance selected from the group consisting of rotenone and rotenone-containing derris-type resins in combination with a material selected from the class consisting of phenothioxin and halogen, alkyl, cycloalkyl, aryl, and aralkyl substituted derivatives thereof in amount sufficient to serve as an activator for the rotenone product.

No. 2,265,156, Insecticide patented December 9, 1941 by Robert J. Geary, Blue Point, N. Y., assignor to Dow Chemical Co., Midland, Mich. An insecticidal composition comprising a substance selected from the group consisting of rotenone and rotenone-containing derris-type resins in combination with a material selected from the class consisting of dibenzyl-disulphide and aryl, alkyl, alkoxy, cyclo-

alkyl, chloro, and bromo nuclearly substituted derivatives thereof, in amount sufficient to serve as an activator for the rotenone product.

No. 2,265,204, Insecticidal Compositions, patented December 9, 1941 by Frank B. Smith and Harold W. Moll, Midland, Mich., assignors to Dow Chemical Co., Midland, Mich. An insecticidal composition.

No. 2,265,205, Insecticidal Compositions, patented December 9, 1941 by Frank B. Smith and Harold W. Moll, Midland, Mich., assignors to Dow Chemical Co., Midland, Mich. An insecticidal composition.

Soap Industry Meets

(from Page 31)

shipped, he said, were Ceylon and Cochin. He said that possibly some copra might be gotten from eastern South Sea Islands and a small quantity from the east coast of Africa, but admitted that the outlook for any substantial quantity was not too good.

The fat and oil picture was further clarified by D. M. Flick who reviewed the position on domestically produced materials. Stocks of tallow and grease on hand at the beginning of 1942 totaled 410,000,000 pounds, he reported. With an estimated 1942 production of 1,550,000,000 pounds, there will be an estimated total supply of 1,960,000,000 pounds. Consumption may run as high as 1,654,000,000 pounds, he indicated, cutting down stocks some 100,000,000 pounds over the course of the year. With a threatened shortage of the lauric acid oils, the demands on tallow and grease may be even greater, in which case stocks might be sharply depleted.

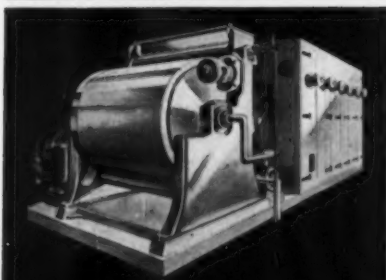
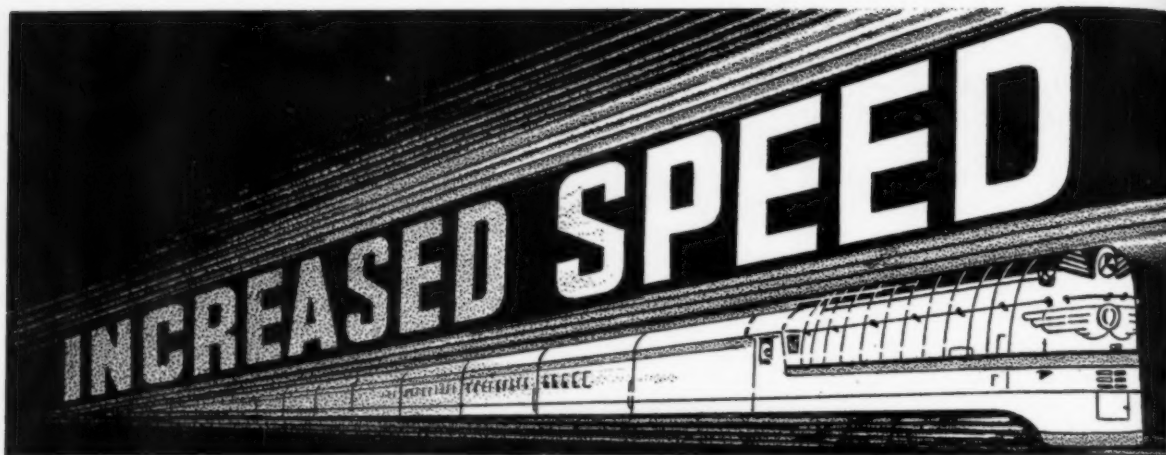
The possible effect of the war effort on the volume of soap production was also discussed at length, in the light of various suggestions for "soap conservation" that have emanated from some government departments. In this connection it was emphasized that maximum glycerine

output depends on maximum soap production, and that perhaps suggestions for soap conservation have come from individuals not thoroughly familiar with this phase of the situation. The important place of soap and cleanliness in maintaining the welfare and morale of fighting forces and the civilian population as well were also stressed. The opinion was expressed that if the fats are available it will not be at all surprising to see the present situation bring about a great expansion in soap use such as occurred during and after World War I.

FOLLOWING the industry meeting, members of the Association of American Soap and Glycerine Producers held their annual election of directors, the directors meeting subsequently to name officers of the association for the coming year. Richard R. Deupree of Procter & Gamble Co. was re-elected president of the association, with E. H. Little of Colgate-Palmolive-Peet Co. serving again as vice-president for the eastern states and F. H. Merrill of Los Angeles Soap Co. representing the western states as vice-president. A new member of the official family this year is D. M. Flick of Armour & Co., who succeeds O. E. Jones of Swift & Co. as vice-president for the central states. Other officers re-elected include N. S. Dahl of John T. Stanley Co., treasurer, A. Roy Robson of Fels & Co., assistant-treasurer, and Roscoe C. Edlund, secretary and association manager.

The personnel of the board of directors of the association for the coming year includes the following:

F. A. Countway, Lever Bros. Co.; N. S. Dahl, John T. Stanley Co.; R. R. Deupree, Procter & Gamble Co.; G. A. Eastwood, Armour & Co.; S. S. Fels, Fels & Co.; J. C. Fitzpatrick, Fitzpatrick Bros., Inc.; G. R. Fulton, Beach Soap Co.; A. Haas, Newell-Gutrad Co.; E. B. Hurlburt, J. B. Williams Co.; E. H. Little, Colgate-Palmolive-Peet Co.; F. H. Merrill, Los Angeles Soap Co.; E. A. Moss, Swift & Company; J. D. Nelson, Andrew Jergens Co.; C. F. Young, Davies-Young Soap Co.



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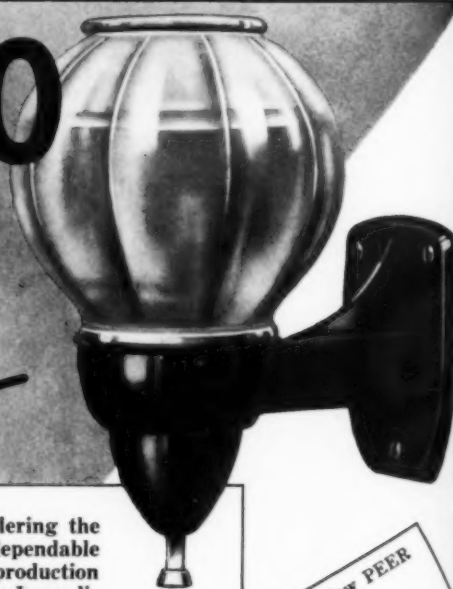
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861—Perfume Catalogue

Classified according to uses in more than 75 different types of products in which perfume materials are used, are the perfume specialties in the new 20-page catalogue "B" of P. R. Dreyer Inc., New York. Among the various listings are those for toilet soap, liquid soap and shampoo, utility soap, theatre spray, fly spray, shaving cream and shaving soap, with suggestions as to use in each product. Prices are given. Dreyer also issues catalogue "A" covering essential oils, aromatic chemicals, natural flower oils, animal products, resins, etc.

862—Lueders Price List

A new policy of listing all its basic perfume materials in one alphabetical list is adopted in a new 1942 wholesale price list just issued by George Lueders & Co., New York. In the past, price lists of the company have shown essential oils in one list, aromatic chemicals in another, and so on. This is the first time all the basic materials have been placed on one list. A list of blended perfume oils is given separately.

863—Floor Colors

A folder on "Colorflex-Plus," a new method for cleaning, coloring and preserving wood or concrete floors, just issued by Flexrock Co., Philadelphia, describes in detail the combination floor treatment. The "Colorflex-Plus" unit consists of two materials—"Floor Ready" and "Colorflex." "Floor Ready" is designed to prepare the floor for color-

ing, while "Colorflex" is absorbed by the floor giving a floor coloring designed to remain uniform with wear.

863—Care of Hard Floors

Franklin Research Co., Philadelphia, has just issued a new illustrated folder entitled "The Care of Marble, Terrazzo, Tile and Cement Floors" which describes the use of F. R. products—"Sealit," "Chekit" and "Rubber Gloss" on these types of floor surfaces. An aid to the prevention of silicosis due to dust from cement floors is offered in the folder, as well as suggestions for making floors safer to walk on.

Coconut Oil Extraction

Mixing water with coconut meat, 1 to 2, or 1 part water to 1 of pressed coconut meat gives mixtures

Hand Cleaners

(from Page 23)

tine; albumen; glue; carbohydrates; sodium alginate; glycerine, for its beneficial effects on the skin and also to prevent the too rapid evaporation of water; and saponin used as a foaming agent (especially in soapless abrasive hand cleaners) as well as numerous other materials.

As was mentioned before, the market for industrial hand cleaners is definitely expanding as a result of higher industrial activity throughout the country, yet the potential size of the market should not be exaggerated. Too many times in the past, small firms have entered the industrial hand cleaner field thinking it a lucrative prospect only to have to leave the field in several months. The size of the market is no indication that anyone can get into the field and make a million.

The average selling price of paste hand soaps is in the neighborhood of 10 to 12 cents for the pound

with fluidities that seem to be best adapted for feeding in a roller press. The size of the meat particles affects the degree of oil extraction; the greater the size the less the efficiency for a given set of rollers. As high as 88 per cent oil extraction can be obtained with the rollers used in one pressing if the meat is comminuted to an average size of 5.9 x 1.8 x 0.9 mm. Selection of the proper pressure for the rolls will depend on the use for which the pressed meat is intended. Within the range of pressures studied, the efficiency of oil extraction increased directly with pressure. V. G. Lava, P. E. Torres and S. Sanvictores. *Philippine J. Sci.* 75, 143-56 (1941).

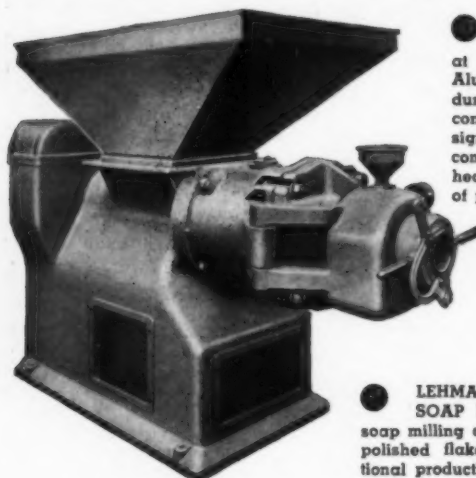
Hydrogenation of Castor Oil

At high pressures and temperatures in the presence of molybdenum and sulfur catalysts, castor oil was 75 per cent hydrogenated, with nickel 28 per cent, and with molybdenum alone 17 per cent. L. Hertelendi. *Magyar Chem. Folyoirat* 47, 49-75 (1941); through *Chem. Abs.*

package, but for larger quantities the price per pound is naturally lower. In a recent sale, one particular paste hand soap was selling at 3½ pounds for 15 cents, or 2—3½-pound packages for a quarter—7 pounds for 25 cents! This product consisted mainly of water, however, together with sand, a little soap, pink dye, and a cheap odor, as the main ingredients. The better class of products, of course, sell at more attractive figures.

Most of the industrial hand soaps are sold in a large number of can sizes: 1-lb., 2-lb., 3-lb., 3½-lb., 4-lb., 5-lb., 6-lb., 10-lb., 13-lb., 15-lb., 20-lb., and 25-lb., and 50-lb. cans. Probably many of these sizes will have to be eliminated because of the shortage of metal for containers. Limitation of container sizes has already been forced in the potash and liquid soap industry, and probably manufacturers of industrial hand soaps will also be forced in the near future to eliminate all container sizes but two or three.

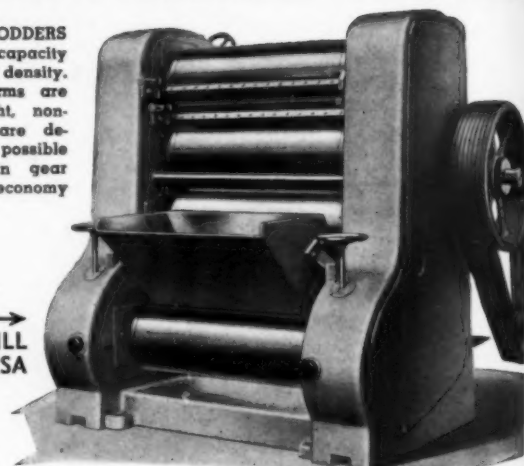
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Hydrogen Peroxide Bleach

Hydrogen peroxide for use in the bleaching of silk, can be made on a relatively small scale by companies wishing to produce their own bleach. Sulfuric acid of specific gravity 1.5, or 59.7 per cent acid, is electrolyzed in the presence of a small proportion of hydrochloric acid or hydrofluoric acid. Some 40 per cent of the acid is converted into persulfuric acid, with about 5.4 volts in the electrolyzing chamber. Water reacts with part of the persulfuric acid to produce monosulfonated hydrogen peroxide. Part of the electrolyte is drawn off and transferred to a distillation apparatus, fresh sulfuric obtained from distillation being added to the electrolyzing bath. The process is a continuous cycle with the same raw material used repeatedly, hydrogen peroxide being the only product obtained.

The liquor which is withdrawn from the bath is distilled under reduced pressure, whereby hydrogen peroxide distills off and can be directly transferred to the silk-bleaching equipment. No losses of oxygen are sustained during this distillation provided no solid impurities have been removed from the electrodes. The residue from the distillation retort has only to be cooled and diluted, when it is ready for return to the electrolysis bath. As used, the hydrogen peroxide is 2 per cent of 100-volume peroxide made alkaline with sodium silicate or ammonium hydroxide. C. C. Downie. *Silk & Rayon*.

Textile Detergent

For the simultaneous scouring and bleaching of materials such as unfinished cellulosic fabrics, a process is employed which subjects the fabric to the action of an aqueous acid solution containing sodium chlorite, and a detergent which is active in the presence of the acid and is substantially unoxidized by the sodium chlorite. The detergent should be from the group consisting of aliphatic alcohol sulfates, sulfonated fatty-acid amides, sulfonated

fatty-acid esters, sulfonated succinic-acid esters, alkylated aromatic sulfonates, or aliphatic sulfonates. Archie L. Dubeau, to The Mathieson Alkali Works. U. S. Patent No. 2,253,368.

Hog Bone Fat

Freshly prepared hog-bone fat was brownish gray with an acid number of 1.6. Lard of the same hogs was yellowish white with an acid number of 0.73. The saponification numbers and iodine numbers were practically the same. In absence of heat, light, moisture, etc., bone fat seems to be as stable in storage as lard. E. Karoly. *Mezogazdasagi Kutatasok* 14, 179-82 (1941); thru *Chem. Abs.*

Oil Refining Patent

Oil is treated at an elevated temperature with a small amount of a reducing agent such as monosodium hypophosphite. It is preferable that the decolorizing step be carried out prior to the usual refining operations with an alkaline reagent. When a solution of sodium hypophosphite was used, the heating was continued until the water was removed and the temperature raised to 255° C. Lever Bros. & Unilever Ltd. British Patent No. 531,047.

Rosin In Soap

(from Page 29)

soap products where it is not generally used today and to recent articles on rosin soap which may be useful to those considering the use of rosin in present products.

Literature Cited

1. Byrkit, U. S. Patent 2,094,117, 1937.
2. Fleck and Palkin, *J. A. C. S.* 59, 1593, 1937.
3. Pohle, *Soap* 16, No. 3, 61, 1940.
4. Pohle, *Oil and Soap* 17, 150, 1940.
5. Pohle, *Oil and Soap* 18, 247, 1941.
6. Pohle, *Oil and Soap* 18, 244, 1941.
7. Pohle and Speh, *Oil and Soap* 17, 100, 1940.
8. Pohle and Speh, *Oil and Soap* 17, 214, 1940.
9. Pohle and Stuart, *Oil and Soap* 18, 2, 1941.
10. Stuart and Pohle, *Soap* 17, No. 2, 34, 1941.
Stuart and Pohle, *Soap* 17, No. 3, 34, 1941.

Fat Storage Technique

The alterations induced in animal fats by keeping for 15-30 days were studied, as well as various refrigeration and antiseptic methods. If it is not possible to keep the fats at -8° C., which is the best method, good results are obtained by the compression of the fats, after adding 5 grams of powdered boric acid per kilogram. G. Ciani. *Oli minerali, grassi e saponi, colori e vernici* 21, 173-8, 183-7, 197-201 (1941).

Effect of Light on Oils

The regions in which light is active in catalyzing rancidity in oils seem to correspond with the light-absorption regions of the oils. The ultraviolet, violet and blue regions promote rancidity the most, yellow and red less, and green and infrared the least. Mayne R. Coe. *Oil & Soap*, 18, 241-3 (1941).

Java Citronella Oil

(from Page 28)

selective breeding. In fact, the grass has suffered through the continued growing for many years and seems to be less hardy and less resistant to diseases than formerly. When plantings are expanded during periods of high oil prices, owners of old and bad fields sell their bibit to other growers for new plantings and, since it is cheaper, inexperienced prospective planters sometimes buy this inferior planting material. Such practice certainly does not help to retain the original good qualities of the plant, for instance its high oil yield, its high citronellal content and resistance to disease.

Harvesting

GRASS planted in December or January can be harvested for the first time in September or October, and today the native growers generally follow this procedure. In former times the estates used to wait a full year until the grass had developed its root system which is important for a long life span. During the peak of production, a healthy

sereh plantation looks like a meadow, although the plants are about three feet (one meter) apart. Each plant forms a sturdy big bunch from which the grass is cut off progressively and ever higher from the soil. The harvesters separate each plant and use knives for cutting. Timely cutting is advisable in order to prevent the grass from flowering.

It is very important to regulate the cutting time in order to increase the yield of the planting. A too short growing period decreases productivity and seems to affect the plants so much that it can ruin a field within a very short time. If, on the other hand, the grass is left standing for more than three months, the lower leaves wither and considerable oil is lost; also the content of total geraniol and citronellal decreases. Thus, an average should be taken between the two extremes, although a definite cutting period cannot be indicated because the climate of Java and succession of the rainy and dry seasons are quite irregular. The best time for cutting seems to be the moment when a part of the stem bears six adult leaves with the seventh leaf in rolled up position. The grass should be harvested three times or, under very favorable conditions, four times a year, but since the small native growers have learned that it is quite easy to transform their grass into ready money, they make four and even more cuttings without waiting for the proper harvesting time. (If a native grower needs money, he simply cuts from his fields as much grass as necessary without giving consideration to the proper maturity of the fields.)

Western Java has its rainy season from October to February and its dry season from May to September, of which, however, only July to September is actually dry. The citronella harvest is larger during the rainy season than during the dry season. If old fields are harvested at the beginning of the dry season and during days without night dew, the plants suffer much and the fields are soon in such poor condi-

tion that it is often necessary to plow them under in order to treat the soil before the next harvest.

Cutting too short, especially cutting below the knot where the leaves are implanted in the stalk, is very harmful and involves the risk, particularly during dry weather, of the blade stalks dying off. Low cutting, as practiced frequently by the native growers, has the further disadvantage of harvesting many nearly oil-free parts of the blades which, when distilled, diminish the yield of oil. After cutting the grass, the harvesters eliminate the old, dried out leaves, and tie the fresh leaves in bundles for transportation to the distillery.

Yield of Oil

IT is difficult to express the yield of oil per acre of grass in definite figures because it depends upon so many factors such as climate, fertility of the soil, age of the planting and method of distillation. As far as the grass is concerned, it can be said that with three cuttings per year, one bouw (= 1.7537 acres) of a good field produces on the average about 12,000 kilos of grass. The average yield of oil can thus be estimated at about 56 pounds per acre.

The coolies earn about fl. 0.25 a day. The cost of cutting depends upon the distance between the plants and runs from fl. 0.10 to fl. 0.25 per 100 kilos of grass, including transport from the fields to the distillery.

The figures on grass yield given by K. W. de Jong in 1922 probably apply to the times when the first citronella estates existed in Java. As average grass production on normal soil during the second year, de Jong indicates about 400 picols (1 picol equals 136 pounds) of grass per bouw or 30 tons per hectare which, taking as average yield 0.7 per cent of oil, means 210 kilos of oil per hectare. (One hectare = 2.471 acres.) This figure is simply enormous, when compared with the estate yields of 1932 to 1936, and is probably due to the

fact that in those early days the very high price of the oil permitted extensive care of the grass fields on estates. Hischmann⁸ confirms such high yields of new plantations in the second year even today, but only in exceptional cases. As a rule, the percentage of oil from grass growing profusely in rich soil is considerably below 0.7 per cent, whereas fields which yield a high percentage of oil usually consist of sandy soils where the grass grows sparsely and slowly. Sereh fields four to seven years old contribute only very little to the total production of an estate and at the low prices of recent years they are not at all economical. As long as prices were very high, an estate could carry on with some old fields but even then an estate consisting chiefly of old fields could not be considered a paying proposition.

Natives, on the other hand, raise their grass mostly on poor soil which in some cases has been under cultivation with various crops for generations without fertilizing. Their grass production during the second and third years is, on the average, 12 tons per hectare. Calculating on a yield of 0.7 per cent, this means 84 kilos of oil. Some native growers uproot their fields at the end of the third year. Thus, they count on actual production for only slightly more than two years because the fourth year is too poor in regard to grass yield. However, most natives wait a little longer before uprooting which means even a much lower average.

References

1. E. Guenther, "Ceylon Citronella," *Soap and Sanitary Chemicals*, Sept. and Oct., 1940.
2. At present Assistant Trade Commissioner of the Netherlands Indies, stationed in London.
3. "The Ethereal Oil Yielding Plants of the Netherlands East Indies and the Preparation of Their Oils," *Indische Mercur*, 1922.
4. "Citronellaolie," *Mededeelingen van de Afdeling Nijverheid No. 4*, Buitenzorg, Archipel Press, 1928.
5. *Bericht Schimmel & Co.*, 1938, 20.
6. *Ibid.*, 1936, 15; 1937, 18; 1939, 15.
7. *Ibid.*, 1936, 16.
8. *Ibid.*, 1939, 17.

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CIVILIAN AIRLINES—Use Pyrethrum-oil sprays for preventing introduction of insect-borne disease by planes arriving from foreign countries.



MEDICAL RESEARCH FOUNDATION—Used Pyrethrum-oil spray for eradication of the Anopheles gambiae mosquito, transmitter of a virulent strain of malaria in Brazil.



INSECTICIDES USED TO COMBAT INSECTS THAT ATTACK MAN AND ANIMALS—Pyrethrum-oil sprays are used to eradicate bed bugs, flies, mosquitoes, fleas, lice. These insects are said to spread typhoid fever, typhus fever, sleeping sickness, infantile paralysis and many other serious diseases. Such sprays are used in the home, in theatres and other places of assembly, in Pullman cars, in kennels and barns.



INSECTICIDES USED IN PRODUCTION OF DAIRY FOODS—Pyrethrum-oil sprays are extensively used to combat insects that attack dairy cows. They are applied to the cattle and also to the premises.

INSECTICIDES USED IN FOOD FACTORIES AND FOOD STORAGES—Pyrethrum-oil sprays are used extensively in flour mills, bakeries, creameries, packing plants, wholesale groceries and many other places where foods are made or stored. They are effective against roaches, grain weevils, flies and many other insects.



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Pyrethrum-oil sprays are used to control citrus thrips, grape leafhoppers, codling moth on apples, lygus on coffee, sugar-beet leafhopper.



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Pyrocide Dust, the original impregnated Pyrethrum dust, is recommended by:
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California Experiment Station, for control of bean thrips on beans, pears, peas.
Idaho Experiment Station, for control of squash bug.
Texas Experiment Station, for control of Hawaiian beet webworm on beets.
Virginia Experiment Station, for control of beet webworm on spinach.
Ohio Experiment Station, for control of strawberry leaf roller.
New York Experiment Station, for control of pentatomids on tomatoes.
New Jersey Experiment Station, for control of blueberry fruit worm.

Also recommended and used by thousands of commercial growers for control of sugar-beet webworm, bean leafhopper, grape leafhopper, cucumber beetle, squash bug, harlequin bug, aphids, cabbage worms, Mexican bean beetle, potato flea beetle, potato leafhopper, pea weevil, cranberry leafhopper, garden flea hopper on tomatoes, and many other insects attacking food crops.



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INSIDE NEWS

FEBRUARY

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1942

Chemistry Plays a Part In National's Research

In the present national emergency it is well to remember that wars very often stimulate progress. The Napoleonic wars gave the impetus which led to the development of the processed foods industries. The ability to process and preserve quantities of food stuffs gave rise to the need for a strong, unbreakable container which would easily conduct heat through its surfaces. Tinsplate was found to meet the requirements for a food container and since that time the tinsplate container and the food processing industries have continuously developed and progressed to the present day, in which canned food is a very important item of National Defense effort.

Tinsplate is composed of a steel base coated or covered with a thin layer of tin. It is well known that ordinary steel is very susceptible to attack and corrosion and would be entirely unsuitable by itself in an unprotected state to serve as a container. The coating of tin on tinsplate serves to protect the iron from attack for two reasons; first, because tin in itself is much less reactive than iron and in contact with moisture does not corrode or rust, second, because in some instances due to highly complicated chemical reaction tin corrodes very slowly and "spares" the attack on exposed areas of iron by means of electrical action.

In order to take full advantage of the protective action of the tin coating on tinsplate it must be carefully controlled, so that a definite amount of tin is present on the sheet, and that this tin is uniformly distributed. As a part of tinsplate inspection the Chemical Division makes frequent determinations of the amount of tin coating on the tinsplate received. How this is done is shown in the accompanying photograph. By means of this procedure the maintenance of certain stan-



A piece of tinsplate of known area is dissolved in acid by means of heat in the presence of an inert atmosphere of carbon dioxide. Following solution of the tinsplate, the amount of tin in solution is determined by means of titration with a standard solution of another chemical. From the result obtained, the amount of tin on any given unit of tinsplate may be calculated. The apparatus pictured provides for nine simultaneous determinations.

dards of tin coating necessary for the proper performance of the tin container is assured.

In the past, research has resulted in numerous improvements both in the production of tinsplate and in increasing its serviceability. It is to be expected at the present time that accelerated research activities will result in the continuation of the supply of essential tin coated containers while at the same time meeting the requirements of tin conservation demanded by the present situation. "RESEARCH IS ORGANIZED THINKING." (66)

Vitamins Seen as Sales Aid

Something that is new and attractive enough to sell and repeat—that is what canners are always hoping their production men can develop. In the field of fruit and vegetable juices they have had impressive success in recent years. Now a resourceful New Jersey canner after months of research has brought out a blend of four vegetable juices—tomato,

celery, spinach and parsley—that is fortified with vitamins B₁, B₂, and D.

A rising tide of consumer interest in better nutrition in recent months is leading many canners to weigh the advantages that fortification of their products with synthetic vitamins offers. Vitamins A and C and minerals are naturally present in several vegetable

juices in adequate quantities. Addition of other vitamins, now made possible through research, promises to accomplish two things: provide a complete schedule of daily vitamin requirements and step up sales. (67)

Herring in B.C.

Phenomenal growth has occurred in the herring canning industry of British Columbia in the past three seasons. In 1941, the orders amounted to 1,600,000 cases in the export business, an increase of 283 percent over 1939.

Two important new facilities have been installed by herring canners in British Columbia. These include methods for partially dehydrating the fish to make it firmer, and a mechanism for packing the fish whole, cleaned and dressed and garnished with tomato sauce, in 1-lb. and ½-lb. oval cans. (68)

Citrus Canners Convert Waste Into Profitable By-Product

Florida citrus canners have talked of converting waste into cattle feed for several years and several of them have done more than talk. Ordinarily it would cost canners perhaps \$100,000 to dispose of the waste materials they will handle during the 1941-42 packs of grapefruit and oranges. But they will process this material into cattle feed and sell it readily for \$30. per ton. The most important single factor in making citrus pulp feed was the discovery that the addition of enzymic or alkaline materials to the raw pulp facilitated the removal of water by mechanical means. (69)

Weathered Wood Effect

A weathered or driftwood effect on new lumber may be obtained by treating the lumber with one or more applications of medium strong solution or ferrous sulphate (copperas). If desired, use a gray-green paint, reduced with turpentine as a stain and as a final finish use a spar varnish, thinned down with turpentine—about one quart to a gallon. (70)

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BY NATIONAL CAN



FEBRUARY

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1942

Canned Rice

Rice growers and canners in the Gulf States are following with more than casual interest successful California experiments in canning rice. For the last two years a program of research has been going on in the University of California laboratories. Rice growers in California, eager for some method of bettering their market, are canning rice and promoting its sales in a small way.

Rice is one of the richest foods in vitamin B content, yet per capita consumption of rice in the United States is the lowest of any country. The English people eat 14 pounds of rice per capita each year. In the United States the per capita consumption is only 4 pounds annually. (71)

British Use Greases in Paint Films

Sewage grease, wool grease, and similar materials have shown interesting substitute possibilities for use in the manufacture of paint films in recent British development work. It has been found that recovered greases can be processed so as to condense unsaponified constituents, which then are applicable as paint media. It has also been found that slight changes in the process enable the simultaneous formation of metallic soaps, particularly magnesium soaps, and that the mixture can be used to produce tough, flexible paint films.

Investigations have also revealed that wax-like materials formed by the condensation of certain aliphatic amines with cyclic polycarboxylic acids which do not form inner anhydrides possess very good binding power as regards oils, and therefore have suggested their use in the formulation of polishes, shoe creams and similar materials. (72)

Grapeseed Oil and Varnish

The processing of grape seed as a source of oil is being intensively developed in European countries. The first pressed oil is suitable for edible purposes, while oil obtained by warm pressing, or second pressing, is for use in varnish manufacture. (73)

Idaho Prune Juice

Although Idaho is best known for its potatoes and is not generally considered a canning state, research workers at the agricultural experiment station are not blind to the possi-

bilities of canning for turning losses into profits. A great many prunes are produced in Idaho, and state workers have developed a formula for producing prune nectar, about the consistency of tomato juice, from fruit that otherwise would be culls. The formula is available to private and commercial canners who are interested. (74)

Movies Use Paint

Hollywood producers use thousands of gallons of paint and related products a year in their pictures, it is reported. One company in a recent year required 21,969 gallons of paint—more than a ton of paint per picture—and 22,633 gallons of thinner. Walls, floors, roofs and many other surfaces must be painted and decorated to make the movie sets complete. (75)

Skin Remover

Skins are removed from fruits and vegetables, after being loosened by heat or other processes, with a device invented recently by a Seattle man. The apparatus is so designed that the skins are removed by friction between the fruits and vegetables themselves as well as between these products and power-driven rollers in the machine. Sprays wash away the removed skins and also cool the fruit to prevent cooking when the skins are loosened by heat. (76)

Kukui Oil May Substitute

Among the many substances that have been suggested as possible substitutes for tung oil is kukui oil, which is extracted from the kukui nut. According to research chemists this product is equal in quality to tung oil. (77)

Salmon Pack Sets Quality Record

Rigid inspection of canned salmon, undertaken on an ambitious scale eight years ago, has paid remarkable dividends to canners. Up to late in October this year 3,730 parcels of canned salmon containing about 6½ million cases had been sampled and examined. This represented about 86 per cent of the total American pack. Inspection indicated that the 1941 pack is probably the best pack of canned salmon ever produced. (78)

Technical Topics

PEANUT OIL is being used as a motor fuel on the desert road to Dakar, Africa. (79)

A COLORLESS CHEMICAL containing nitrogen has been extracted from ragweed pollen and is believed to be a major cause of hay fever. (80)

A CHEMICAL made from eucalyptus oil has been patented in Australia, following successful tests as an anti-knock agent in gasoline. The chemical is phellandrene. (81)

THE "BLACK MARKET" in England for cosmetics is reported by the English trade press to be substantial. English production of cosmetics is limited by Government decree. (82)

COPAIBA OIL, used in medicine, in varnish and in photography, is produced in Brazil, Colombia and Venezuela. The United States has just contracted for the entire Brazilian production. (83)

PINE OIL is used in perfumery, paint, textile finishing and in great quantities in the separation of metals from their ores. A new synthetic turpentine relieves a serious shortage. (84)

THE ELECTRON MICROSCOPE is revealing a vast hidden world to scientists. Smoke particles from burning metal are shown to have characteristic shapes, often crystalline. (85)

CALCIUM FIRING OF CANNED TOMATOES. About a million cases of canned tomatoes were packed this year with small quantities of calcium added to produce a product that is firmer and can be sold as higher than standard grade. Most of the canners used tablets made of table salt and calcium chloride. By using this treatment on the small Italian type tomatoes, canners now believe that a product can be developed that will be popular for winter salads, opening an important new market. The process of adding minute quantities of calcium chloride to canned tomatoes was legalized in June 1940. (86)

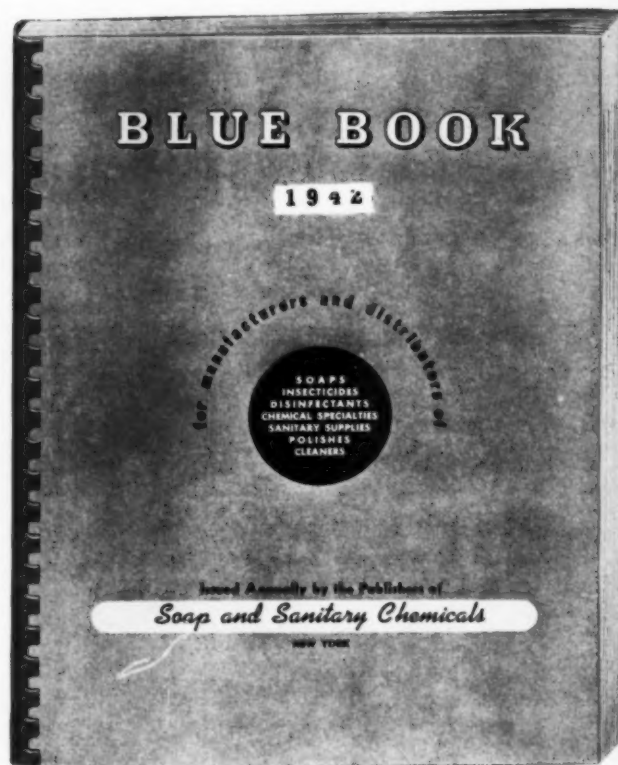
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Contents of the New 1942 BLUE BOOK

Soap Specifications— Suggestions as to what a properly drawn specification should and should not cover.

Soap Output— A compilation of figures on the record breaking output during 1941.

Soap Fat Statistics— Data on oil and fat consumption during 1941, together with the latest data on stocks for 1942 use.

Soap Buying Habits— A study of the trend in soap buying habits based on a study of a typical market area.

Rotenone— A study of the rotenone bearing plants, their cultivation, importation, use as insecticides, etc.

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Quality in Floor Wax— What constitutes a good floor wax? A review and evaluation of comparative importance of gloss, water-resistance, non-slip qualities, ease of application and removal, etc.

Paint Cleaners— A review of the various types of liquid paste, and powdered products on the market, with suggestions for their manufacture.

Index to Soap— Composite index to the monthly issues of *Soap and Sanitary Chemicals* for the past five years.

Testing Section— Latest official methods of the National Assn. of Insecticide & Disinfectant Mfrs. and of the Association of Official Agricultural Chemists for testing the efficacy of insecticides, insecticidal raw materials and disinfectants. Included in this testing section will be the Peet-Grady Test, the Seil Method, Gnadinger-Carl Method, F.D.A. Method, Mercury Reduction Method and Rotenone Determination Method.

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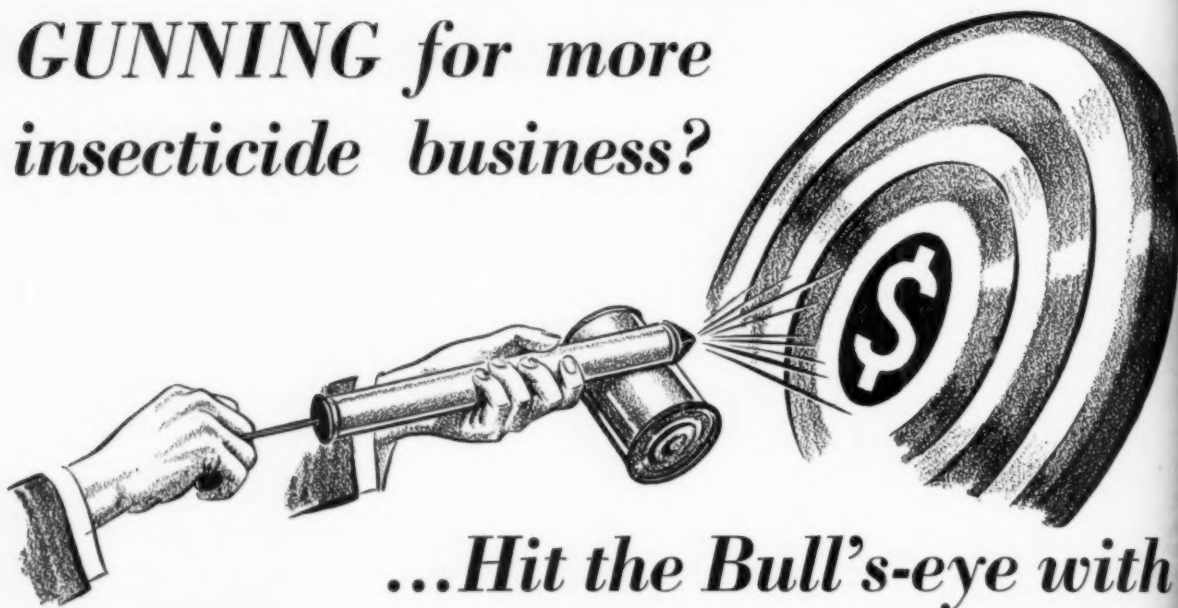
Plant and Laboratories . . . Bayonne, N. J.

February, 1942

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79

*GUNNING for more
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PYREFUME has "everything it takes" to make an effective spray insecticide. Most important, of course, is a dynamic death-dealing power in PYREFUME against flies, bedbugs, roaches, mos-

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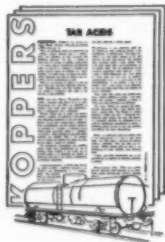
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SANITARY PRODUCTS

A SECTION OF SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

PRICES for most household specialties going to market today carry advanced prices, or in lieu thereof reduced package size. The majority of products designed to be sold at a fixed price, such as five-and-dime and other chain store items, appear to be showing net weights from ten to twenty per cent smaller. Some of the chains are reported not to be unalterably opposed to a fifteen-cent size to replace the former ten-cent package if conditions warrant this change. In fact, with the exception of certain fly spray brands, prices of small-package items in the insecticide, polish, disinfectant, shampoo, cleaner, floor wax and other chemical specialty fields are higher all along the line. In view of present costs and markets, it appears to be a trend which few if any manufacturers can afford to buck.



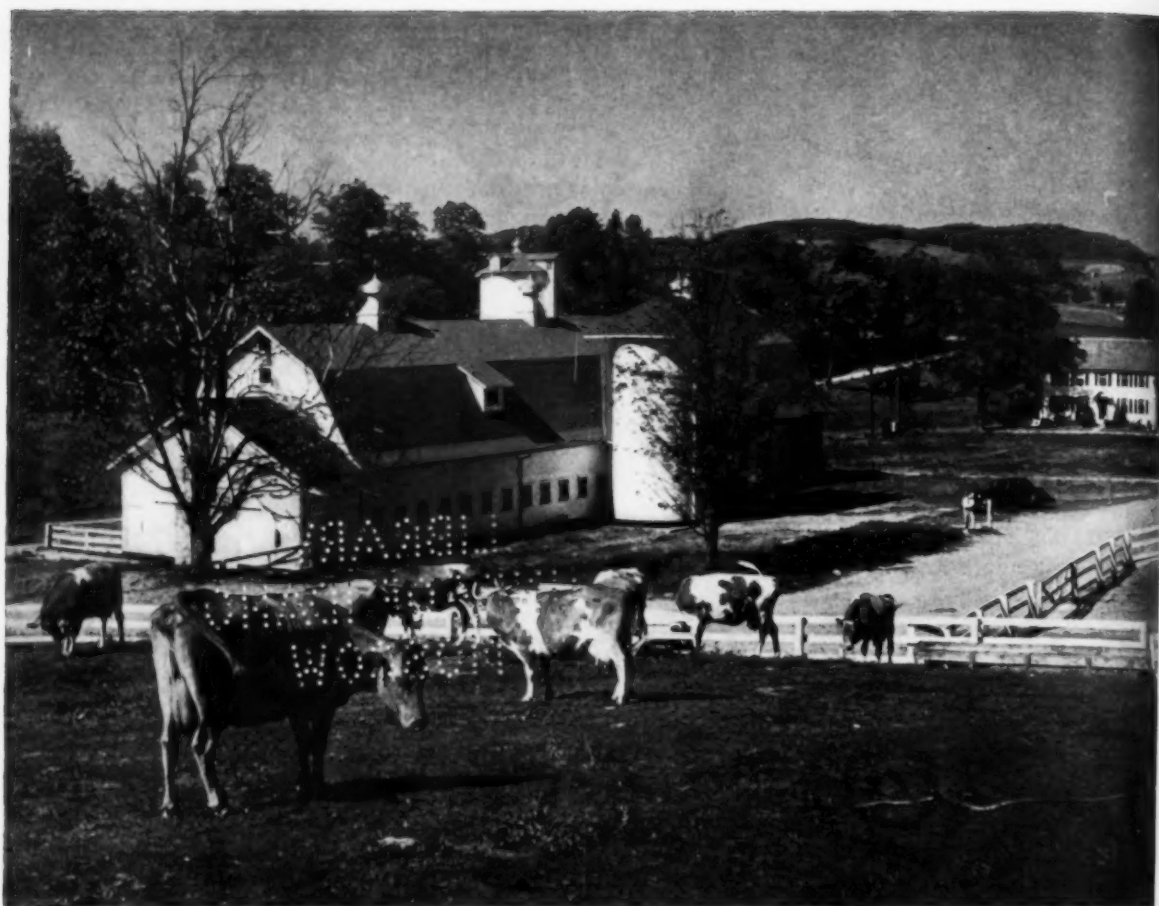
A NEW specification covering the 1942 insecticide requirements of New York State was recently issued. Just as the 1941 insecticide specification was so severely criticized because it called for a product which would keep premises free of bedbugs for ten months, would kill roaches without hitting them, and would meet the requirements also of a good cattle spray, the 1942 specification makes the same errors. As was pointed out a year ago, this specification is impossible of attainment and no reputable manufacturer would state that he could meet its require-

ments. New York State officials were informed of these facts, but they have chosen to ignore them again. The State last year paid two or three times as much as it should have for what it got in the way of a liquid insecticide. Apparently it plans to do the same thing again this year.



THAT a shortage of insecticide materials may create serious problems in food production, if not this year then next, has been predicted in several quarters recently. War needs and lease-lend shipments of metals and the like will reduce insecticide output. Imports of derris from the Far East will be cut down, and this will throw the load of demand for rotenone insecticides on cube, timbo and other South American sources. Stocks of pyrethrum will be eaten into heavily to replace rotenone and metallic insecticides in agriculture. And it is here that the manufacturer of fly sprays and other household insecticides enters the picture to take what is left of the pyrethrum supply, if any.

As far as the household insecticide manufacturer is concerned, much will hinge on the ability of Kenya to supply increased tonnages of pyrethrum and to get them to the American market. Also the ability of manufacturers of synthetic insecticide materials to increase production will be an important factor in determining whether we are to have enough household insecticides to go around this year and next.



What a COWMAN expects of a COWSPRAY

DAIRYMEN probably use more fly spray, certainly that of the repellent type, than any other group of consumers. The problems of sanitary milk production have been responsible for creation of this demand. Briefly stated, the dairyman wants a spray that will protect the cows during the milking process for the comfort of both cow and attendant. He also hopes to get a spray that will provide sufficient protection so that increased milk production will result. If possible, he wants a spray that not only repels but also has high knockdown and killing properties in order that fly numbers may be re-

* Before Natl. Assn. Insecticide & Disinfectant Mfrs., New York, December 1, 1941.

A. O. SHAW*

Kansas State Agricultural Experiment Station

duced, thereby supplementing other control methods. In repellence, time is an important factor. The longer the spray is effective, the more satisfactory it would be. The spray must have no ill effects on the skin or general condition of the animals.

Time will not permit an exhaustive review of the literature. Attention is called to the abstracts of methods and the bibliography prepared by the special committee of the National Association of Insecticide

and Disinfectant Manufacturers, Inc. as published in Volume 27, No. 8 of *Soap and Sanitary Chemicals*, in August, 1941. It is worthy of comment that this committee reported no one method should be accepted as the official test at the present time.

Extensive field experiments on the efficacy of various fly spray constituents, combinations thereof, and some commercial sprays were conducted at the Kansas Agricultural Experiment Station during the summer

months of 1940 and 1941. These experiments have been under the direction of Dr. Roger C. Smith of the Department of Entomology as a cooperative project between the Departments of Entomology and Dairy Husbandry. Also associated in the project were Prof. F. W. Atkeson, head of the Department of Dairy Husbandry; Russell Borgmann, graduate student in Dairy Husbandry; and Floyd H. Holmes, graduate student in Entomology. Dr. H. C. Fryer, experiment station statistician, has also rendered invaluable service in the statistical analyses of the data.

In reporting the results, the discussion will be limited to the following factors:

Repellence

Effect on milk production

Effect on the cows

Knockdown and kill in dairy barn

Data were also obtained on such factors as:

Breed differences in fly susceptibility of cows

Individual differences in fly susceptibility of cows

Effect of color on fly susceptibility

Effect of size of animal on fly numbers

Comparison of areas of animals affected by flies

Effect of climatic conditions on fly numbers and feeding habits of flies

Seasonal variation in numbers and species of flies.

Time will not permit discussion of the latter list, and also most of these factors are not of as fundamental interest as those in the first list.

Repellency Trials

THREE series of trials were conducted in 1940. Sixteen cows were selected to measure the average susceptibility of each cow after a preliminary trial of seven days. The cows were divided into four groups of four cows each, the groups being balanced according to breed of cow, average daily milk production, and fly susceptibility based on the average susceptibility of individuals. The

groups were numbered 1, 2, 3, and 4. During the first four days group 1 was unsprayed and acted as a check while groups 2, 3, and 4 were sprayed with selected materials, thereby making possible comparison of three sprays with check. At the end of each four-day period, the groups were rotated in numerical order, group 2 becoming the check group, group 3 being sprayed with the material previously used on group 2, and group 4 being sprayed with that previously used on group 3, and group 1 taking the previous place of group 4. At the conclusion of the second four-day period, the groups were shifted again in numerical order, and the same was done on the fourth four-day period. Under this "round robin" system covering 16 days, all 16 cows were used as checks for a four-day period, and likewise were sprayed for four days with each of the three sprays being studied. The purpose of such a system is to eliminate errors in balancing groups and differences due to changes in climatic conditions.

The cows used in 1940 were all milked three times daily, in the barn at 2:30-4:30 a.m., 10:30-12:30 a.m. and 6:30-8:30 p.m. Each animal was sprayed at about 6:30 a.m. and fly counts were begun at 7:00 a.m. Hourly fly counts were continued until 10:00 a.m. when the cows were brought in to be milked. To obtain fly numbers at other times in the day, the cows were sprayed again at 1:00 p.m. and four hourly counts were taken, beginning at 1:30. The cows were always sprayed and counted in the same order. Spray was applied as uniformly as possible over the entire body with a small electric sprayer, using 25 c.c. of spray per cow. The cows were washed at the conclusion of each four-hour period, before being sprayed with different materials. They were staked individually in the same pasture without shade while being observed for fly numbers.

When the data obtained in the summers of 1940 and 1941 were studied, it became apparent that within sprays, within groups of cows, or

within hours, the distributions of flies were quite definitely skewed. While the majority of the counts per cow per hour fell below 25, enough of the counts were greater than 25 and ranged on up into the hundreds to make the arithmetic mean a misleading measure of the typical count for a given classification. Moreover, proper measures of variability could not be obtained.

It was found that the sampling mean, \bar{x} , and the sampling variance, V , were significantly correlated for any particular classification, indicating a serious amount of non-normality. Plotting, and the value of the correlation coefficient, r , showed the relation between \bar{x} and V to be chiefly linear; so a square root transformation was used. Since most of the counts were below 50, 0.5 was added to each count before the square root was taken. All analyses and comparisons of means are based on the transformed data.

The square root transformation justified itself in this study by reducing the linear correlation, 4, from a highly significant value to a definitely non-significant value in all cases investigated. That the transformation had done much to remove excessive non-normality was shown graphically also by the distributions in the transformed data.

Although the initial series were conducted in a systematic manner, all essentially followed Latin Square design. Groups of cows, periods of time, and sprays were taken as the rows, columns, and treatments within cell respectively. The 7x7 Latin Squares used in the last half of the 1941 tests were non-systematic.

The data obtained in the tests described above were analyzed by means of the Analysis of Variance, and t-tests. The data were arranged in two ways in order to obtain more information (1) in a spray x hour classification; and (2) in a Latin Square arrangement on groups, periods, and sprays. The former grouping showed the way in which the effects of the sprays diminished during the day and gave an opportunity

to describe that trend statistically. The latter grouping—using only on the 7x7 squares—gave the proper error term for spray comparisons.

The proper statistical methods for conducting fly spray tests are still under investigation. It is believed that the techniques described above are as good as any known.

Accuracy of original data is of fundamental importance. Since flies move about while the count on an individual cow is in progress, and since the numbers vary widely between cows and hourly counts, the accuracy of the counting might be questioned. Comparison of counts obtained simultaneously on the same cows by two operators showed no significant difference, when statistically analyzed. Likewise, an analysis of the relative constancy of fly susceptibility of individual cows, and the accuracy of balancing groups according to fly susceptibility showed no significant differences between groups.

Since the results of both years showed that horn flies (*Haematobia irritans*) are easily repelled by any of the sprays tested, the data on stable flies (*Stomoxys calcitrans*) only will be presented to avoid confusion, save time, and show differences between spray materials.

During the summer months of 1940 and 1941 a total of six repellency trials were conducted. In the first six trials various known percentages and combinations of synthetics and extracts in base oil (colorless, odorless distillate with a viscosity of 50 seconds) were tested to determine the value of these spray materials. In addition various percentages of each of the spray materials were used to determine the percentage of each ingredient necessary to effect a highly significant difference between the unsprayed checks and sprayed animals as measured by fly population.

These trials have clearly demonstrated that the effectiveness of a spray is in direct relation to the percentage of active ingredient use in the base oil. Each of the sprays used

showed a highly significant difference over check. All of the sprays showed highly significant differences from check at the eighth hourly fly count (7½ hours after spraying). These results also demonstrated that fly sprays compounded according to accepted recommendations result in a longer effective fly repellency than is commonly believed. Notwithstanding the fact that most cow men believe fly sprays to be effective for only one or two hours, these data definitely prove that this repellency lasts for at least eight hours. Although statistically the sprays were effective even at eight hours after spraying, it is doubtful however whether the degree of repellency is sufficient to be of significant importance to the comfort of the cows.

One series of trials was conducted to determine whether several of the nationally advertised fly sprays were equivalent to the sprays of known composition used in the previous series. Data showed that, of the sprays used, the most effective commercial spray was approximately as effective in repellency as the most effective spray used in the previous series. Two of the commercial sprays although significantly more effective than check, were decidedly inferior to a spray of known composition or the most effective commercial spray.

Effect on Milk Production

TWO procedures were used during 1940 in a study of the effect of spraying cows on milk production. In the three "round-robin" spray tests the cows were selected to balance the groups according to milk production as well as the other factors previously mentioned. The difference in average production between groups was so small that not only is there no indication of any effect from spraying with any of the materials, but the balance between groups was remarkably close. Although no benefit can be attributed to spraying, neither was there any depressing effect.

Since in the above groups the cows were sprayed for only four

days continuously and then washed before the groups were rotated to another treatment, the question arose whether sufficient time had elapsed to cause enough spray to accumulate on the animals to reflect any unfavorable effect. Therefore, 20 cows were selected from the college herd and two groups of 10 cows each were balanced according to milk production. The cows were managed in the usual manner for the entire herd, such as running together in paddocks and pasture.

The cows in one group were sprayed twice daily (6:30 a.m. and 12:30 p.m.) with 25 c.c. of spray per cow per spraying. The other group was not sprayed and was used as a check. The periods of spraying covered 10 days. After the first period the sprayed cows were washed and the groups reversed. This reversal system with the two groups was continued for 55 days, several different sprays of known composition being used.

Examination of the trend lines of the average production of each group shows no consistent difference between the periods when the cows were sprayed and when not sprayed. The decrease in production appears to be linear with no consistent deviations by periods on the two treatments. Day-to-day variations are expected in the routine management of cows. These results indicate that the cumulative effect of spraying twice daily under the conditions of this experiment had no effect on the average milk production of a rather large group of cows managed under conditions typical of average farms.

Knockdown and Kill

TWO general types of sprays are on the market, the repellent type and the killing type. Dairy men would prefer to have a spray that would fulfill both functions. Two sprays might differ in repellance but rank in the opposite order in killing power. Observations indicate that sprays differ considerably in comparison of knockdown and kill. It was deemed desirable to measure both the knock-

down and kill effect of several of the sprays of known composition, which had already been tested for repellance. Several nationally advertised livestock sprays were also included for comparison.

The procedure used consisted of hanging cylindrical screen wire cages about 6x9 inches with screen wire tops and bottoms in two barns containing cattle. The cages were hung 12 feet from the center of the barn and about 11½ feet from the wall. Four cages were equally spaced throughout each barn. A known number of flies (from 50 to 100) were placed in the cages, and the barn was sprayed with a power sprayer to get a good dispersion. The volume of each barn was about 11,500 cubic feet and 30 c.c. (about 1/3 pint) of each spray was used, or about 1 c.c. for each 36 cubic feet. Ten minutes after spraying a large number of flies were gathered off the floor and a known number placed in cages containing water and sugar for feed. The cages were taken to another building where no spraying had been done and at the end of 24 hours the dead flies were counted.

Practically the same efficacy was obtained in knockdown at the end of 5 minutes as at the end of 10 minutes. The number of flies which would be knocked down through longer exposure was not determined.

Considerable difference in killing power was found between the sprays. The most efficient spray killed 90 per cent of flies that were knocked down, while the least efficient spray killed only 43 per cent of flies that were knocked down. Five of the sprays were significantly better than three others. Some of the best sprays from the standpoint of knockdown were among the poorest as killers. For example, one of the sprays which resulted in the best knockdown ranked next to last in killing effect. Another spray "knocked down" only 34 per cent of the flies and killed only 68 per cent of those that were knocked down.

In preliminary trials an attempt was made to simulate the Peet-

Grady laboratory method by using the same amount of spray per cubic foot of volume —1 c.c. of spray per 18 cubic feet of volume. It was found that such a ratio of spray to volume was impracticable for barn tests because the floors became so slippery from oil coating that it was difficult to work in the barn, and the fog of spray was more than would seem desirable. Some difficulty was also experienced in obtaining the desired fog condition in the barn when oils of less than 50 seconds viscosity were used as the base for spray ingredients.

Effect on Dairy Cows

FLY spray has been reported to cause "burning" of the skin indicated by thickened, wrinkled skin with sloughing of large dandruff-like particles. Continuous daily sprayings have also been suggested as the cause of more distress among cows particularly when they are left in the sun, as indicated by high body temperatures and excessively fast respiration. In fact, effect on the cows has been one of the factors considered in the choice of materials to be used in repellent type sprays.

Since most of the research herein reported involved the use of sprays of known composition, an opportunity was available to measure the effect of certain ingredients on the animal. Whether the pathological condition of the experimental cows, both when sprayed and not sprayed, was due to the effect of control by

tethering or due to residual effect of previous spraying is not known.

No "burning" or roughening of the skin was observed during the trials for the two years with any of the sprays used, except two animals which were excessively high in temperature. This raises the question whether skin injury reported by others was due to the ingredients of the spray, or to the indirect effect of sprays resulting in pathological condition of the animal caused by high body temperature.

No significant difference in body temperature, respiration or pulse rate between sprayed and unsprayed checks. Access to shade and wetting down were found to help cows to maintain body temperature in spite of very high atmospheric temperature.

Athlete's Foot Preparation

A product for athlete's foot control which is claimed to stop itching immediately and to leave no stain on skin or clothing is announced by Dr. Edward Francis, medical director (retired) of the U. S. Public Health Service, in the *Journal of the American Medical Association*. The remedy consists of a mixture of three parts of phenol and one part of camphor, which can be prepared by any pharmacist. He reports that the mixture is non-irritating and may be painted between the toes several times a day. Users are warned that the preparation should not be applied to wet skin. *Science Supplement* 94, No. 2451, p. 16 (1941).

This Year Of All Years...

Have you made arrangements to attend the 17th annual Drug & Chemical Trade Banquet on March 12, 1942, at the Waldorf-Astoria? The Banquet this year will represent the largest gathering of executives in the drug, chemical and allied trades ever to meet at one place. In short,—*"everybody will be there."*

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What Is Happening To FLOOR WAXES?

By C. S. Kimball*

Foster D. Snell, Inc.

FLOOR wax is much more than a wax. It would be impossible to wax a floor, in finite time, if we used a preparation described by the classical definition of wax, which according to Webster's New International Dictionary is a substance containing chiefly esters of higher monohydric alcohols, in addition to hydrocarbons, free fatty acids and free higher alcohols. For the purpose of discussion here, floor wax means any product, paste or liquid, solvent or aqueous type, which contains a wax-like material and which is used to wax floors.

It has been stated that the average consumer and more especially the housewife, does not care whether a product contains carnauba wax or pickle juice just so long as it performs the function expected of it. Nevertheless it would seem that there is an implied warranty on the part of the manufacturer that a product designated as a floor wax contain some wax or wax-like material.

In 1933 a Governmental agency made an attempt to establish a new definition for liquid wax. In the course of hearings on an unfair trade-practice case against a manufacturer of water-wax dispersion, this agency took the viewpoint that only a solvent-type liquid wax could properly be called a liquid wax. The action was dropped after long and extended hearings. Much testimony was taken concerning the question of what the consumer expected when he asked for a liquid wax for use on floors.

* Before Natl. Assn. Insecticide & Disinfectant Mfrs., New York, December 1, 1941.

Whether paraffine is a wax was discussed at length. On the basis of total solids-content, the water-wax dispersion under attack had a higher percentage of true wax than did the average solvent-type liquid wax. By definition paraffine is not a wax and the solvent type of product contained a large proportion of it in its solids content. Many objections were set forth during these hearings to the use of shellac, other resins, and soap in a liquid wax for use on floors. One might have gained the opinion from certain testimony that it was no less than high treason to use shellac or other resins in a liquid wax.

It is interesting to speculate as to what might have happened had some of the present day so-called self-polishing waxes been involved in that case. Would this agency have reached the same conclusion regarding products, the solid matter of which consists of 80 to 85 per cent resins and non-waxy matter and only 15 to 20 per cent of waxy material? Is it not fairly probable that the term liquid wax would have been forbidden in connection with water-wax dispersions? Would this type of liquid floor wax now be known as floor polish? If such were the case, the question quite naturally follows as to whether the self-polishing water waxes would have gained the prominence in the field which they now hold.

Although water-base floor waxes have achieved an outstanding commercial success only within the last twelve years, as early as 1917 a Swiss Patent (1) covered the prepa-

ration of an odorless floor wax made by heating a dilute soda solution with stearin, borax and beeswax and stirring constantly until the emulsion had cooled. Again in 1912 there is reference to wax-soap emulsions containing no volatile solvents for use as floor waxes (2).

Carnauba wax has long been valued highly for the peculiar properties which make it so desirable for polishing purposes. It is not high melting point or hardness alone which make it so useful. Several other high-melting and hard waxes are available but they have other properties which make them less desirable for polishing purposes than carnauba. The stickiness of candelilla wax is a specific example of this. In order to have a wax content which furnishes a protective film and high lustre on a floor surface, it is necessary to admix the carnauba wax with other waxes, wax-like materials, or dispersing agents, and to disperse these in a liquid or other medium which permits ease of spreading. There have been evolved through the years numerous paste and liquid products varying in composition but all containing some wax or wax-like material. During the 1920's it is safe to say that no reputable American manufacturer would have called a product a floor wax unless it contained a substantial amount of carnauba wax. Until about 1927 floor waxes were all of the volatile-solvent type, either in the form of paste or liquid.

Carnauba wax has long been used and still is used for many purposes other than in floor prepara-

tions. One application is as a dressing for leather; it appears that the so-called self-polishing water wax evolved directly from these leather dressings. As far back as 1909 the leather trade abroad used water-wax-shellac preparations for the treatment of leather. During the year 1922, in the course of work being done at the Leather Institute connected with the University of Cincinnati, mixtures of shellac and carnauba-wax dispersions were used to produce a lustrous and protective coating on interior wall surfaces (3). It is not at all clear whether the idea of using a similar preparation for floors carried over from the use on interior walls, or whether the advent of self-polishing wax arose from the accidental spilling of one of these water-wax-shellac dispersions, which dried on the floor to give a polished surface without rubbing. In any event the first commercial sales of self-polishing floor wax started in 1927. By 1929 one manufacturer had demonstrated, to the amazement of the rest of the industry, that there was a large market for a water-base type of floor wax. Within the next three or four years a large number of manufacturers, both large and small, were making and selling this type of floor wax.

The composition and retail selling price of the usual water-wax dispersion of that era may be of interest. The typical product of 1932 contained 13-14 per cent solids, of which 65-75 per cent was carnauba wax, 10-15 per cent shellac, 10-15 per cent soda soap, and 5-10 per cent borax.



Refined No. 3 North Country grade of carnauba wax was selling for about 16c per pound and No. 1 yellow grade for about 20c per pound. Assuming that the typical product contained 10 per cent, on the basis of the product as purchased, or approximately 8/10 pound of carnauba wax per gallon, the cost of the wax

alone was 13c if refined No. 3 was used, or 16c if No. 1 yellow carnauba wax was used. The retail price for these floor waxes at that time was about 75 cents per pint and from \$3.00 to \$4.50 per gallon. No doubt this explains why there were so many manufacturers rushing into the market.

Compare that picture with the situation prevailing at the present time. Some of the products now on the market contain only 10 per cent of total solids, although the minimum requirement of not less than 12 per cent solids in Federal Specification P.W-151 has almost become the standard of the trade. The carnauba wax content of some brands is no more than 20 per cent of the total solids; few remain in which the carnauba content is 65-75 per cent of total solids. In some cases the resin content is 65-75 per cent. In general the soap content has been lowered. Borax is omitted entirely in a limited number of these wax dispersions. The price of carnauba wax, a refined No. 3 North Country grade, is now approximately 80c per pound. Therefore, any product which still contains 10 per cent, or 3/10 pound of carnauba per gallon, will show a cost of 64c for wax alone. Certain brands of these floor waxes are being sold at retail for 20c per pint and \$1.19 per gallon. Certainly something has happened to self-polishing floor wax.

BECAUSE of the fact that carnauba wax has more than doubled in price during the past few years, with the cost of other waxes increasing greatly, efforts to find substitute materials for waxes have been redoubled. A wider variety of materials have been tried as substitutes in the water-wax dispersions than in the solvent-type liquid and paste floor waxes because the former type provides a greater opportunity for the use of substitutions. We have seen the use of shellac expanded to the point where as much shellac as wax is used. The effects produced by shellac in self-polishing wax have been described by Gardner (4). Increases in the cost of shellac have acted as a deterrent against its greater use, and increased attention given to other resins, natural and manufactured. The merits and disadvantages of the spirit-soluble copal gums, particularly Manila copals have been presented in technical publications (5). Perhaps the disadvantage of poor shelf stability, when a large proportion of

copal gum is employed, has not been stressed sufficiently. The use of these resins is becoming more and more widespread, particularly in the products in the low-selling price field.

The use of casein to replace carnauba has been investigated by many independent workers and the idiosyncrasies of water-base dispersions containing casein have been learned by some manufacturers only after the products were on the dealers' shelves. Gums and resins were originally added, not so much to replace the wax ingredients, as to produce a less slippery surface film and a more wear resistant film. The tendency more recently is to use these as substitutes for wax rather than as additions to give an improved product.

Other vegetable waxes such as candelilla and ouricuri have received a great deal of attention by investigators and floor wax manufacturers. With both of these waxes there are very definite limitations on the quantity which can be used to replace carnauba, without modifying the properties of the finished product. Water-wax dispersions in which carnauba is completely replaced by candelilla or ouricuri have been prepared by many investigators but few if any of these dispersions have reached the market as floor waxes. A large number of so-called synthetic waxes have been offered as substitutes for carnauba. With one or two possible exceptions none of these waxes is truly synthetic. For the most part they are mixtures or compounds of vegetable waxes, sometimes containing a portion of carnauba wax, with other resinous or wax-like substances. In 1936 a series of truly synthetic waxes having high melting points was offered by an American company. Apparently these waxes were not acceptable as substitutes for carnauba because manufacture was discontinued within a few years. Synthetic waxes produced in Germany and consisting largely of montanyl montanate, are being sold here but the quantity available is said to be far less than the present demand. These par-

ticular waxes have peculiar properties and are perhaps best known for their ability to act as blending agents in the solvent-type liquid and paste floor waxes. Many of the smaller wax manufacturers have been hard pressed recently because of the shortage of these waxes.

To a limited extent resins are being used as blending agents as well as for other specific properties in volatile solvent-type floor waxes. The use of cellulose esters and ethers has been suggested as modifiers of some of the lower melting waxes in order to raise their melting points. Unfortunately the cellulose esters and ethers are not compatible with paraffine, which serves as a softener to increase the spreading power of carnauba wax. Moreover the cost of these cellulosic modifiers is substantially the same as that of carnauba wax.

In viewing the widespread use of resins in floor waxes it is interesting to note that they have apparently been used for this purpose for years. In 1914 a Swiss Commission for Floor Preparations decided that floor wax should contain 30 per cent solids; that water and mineral substances only should be present in soap containing waxes; and that these should not contain resin or unhealthy odorous substances. A German reference (6) of 1914 states that a good floor wax should be capable of direct application without thinning and contain no rosin or other substances which would leave a resinous coating. In the present state of the art and with particular reference to the water-wax dispersions we should not be restricted by the standards of 1914 or even 1934. A floor wax containing resins may be just as serviceable to the consumer as one which does not contain resins. Moreover the product containing resins may have advantages over the product lacking them. Since the point has frequently been reached where the resin content greatly exceeds the content of waxy substances, it is notable that the Sanitary Specialties Scientific Committee of the N.A.I.D.M. has tackled the prob-

lem of trying to do something about grades and standards for water-wax dispersions.

THE subject of the economics of self-polishing floor waxes is a topic of much discussion in the councils of manufacturers. It may be of interest to investigate the relationship of composition to raw material cost and retail selling price of a self-polishing wax, recently sold to the individual consumer in gallon cans in the New York City area for \$1.19. The total solids were found to be 11 per cent by weight. A sample of the product purchased on the open market contained 0.55 per cent soda soap, 1.0 per cent triethanolamine soap, 3.85 per cent Manila copal gum and 5.6 per cent waxy matter. Had the waxy matter been all carnauba the manufacturer must have used 0.46 pounds per gallon, costing at 80c per pound, 37c for the wax alone. With Manila copal selling at 12½c per pound the gum present, equal to 0.32 pounds per gallon, would cost 4c. The cost of soda and triethanolamine soaps would be just under 2c at current price levels. The total raw material cost, assuming that the waxy matter is all carnauba, is therefore 43c per gallon. The cost of a three color lithographed can at current prices is approximately 12c so that the net raw material cost and container cost becomes 55c per gallon. Just what a floor wax costing 55c for naked raw materials and container should retail for per gallon is a matter which must be decided by the individual manufacturer, based on his known operating and selling costs and profit margin desired. It is perfectly obvious, however, if the usual discounts to jobbers and dealers are applied, totaling perhaps 50 per cent of the retail selling price, that the manufacturer is either losing money, or is not using any appreciable amount of carnauba wax in the product.

If floor waxes are to continue as such, it seems reasonable that they should continue to be based on carnauba wax, or wax-like material equivalent in properties. Sufficient of this should be present to give the type

SUPPLY PROBLEMS

What is the sanitary supply manufacturer doing about his raw material supply problems? How is he managing to get along in the face of increasingly serious shortages of sodium fluoride, solvents, chlorine - containing products of all types, packages, containers, shipping materials, etc.? The editors of "Soap and Sanitary Chemicals" are currently interviewing a representative group of firms and will report on their experiences in meeting supply shortages in our next issue.

of floor finish and protection already established by the use of carnauba. The price of the product will naturally require adjustment to cover the high cost of wax materials. The purchasers of these products will no doubt become aware of the situation in time, and may become suspicious of the low-priced "bargain." Quite possibly performance tests will be demanded, at least by large-scale users, to counteract the sale of the questionable product. Such a product could not be expected to have the properties of a wax and should not be so represented. If it can be endowed with desirable properties of its own, it should be made to stand on these, even though the temptation is to imitate the sales arguments of products with an established reputation and past commercial success.

Literature Cited

1. Swiss 75,450, Aug. 1, 1917. H. von Rothe.
2. Robaz, K. *Farben Ztg.* 18, 757-9, 802-4, 858-9 (1912-13).
3. Bowden, G. A., *Private Communication*.
4. Gardner, W. H. *Soap*, Vol. XVI, No. 5, 94-97 (1940).
5. Allan, R. H., *Soap*, Vol. XVII, No. 12, 118-147 (1941).
6. Besson, A. A. and Jungkunz R., *Chem. Ztg.* 38, 1141-2, 1173-5, 1182-5 (1914).

"This Chemical Age"

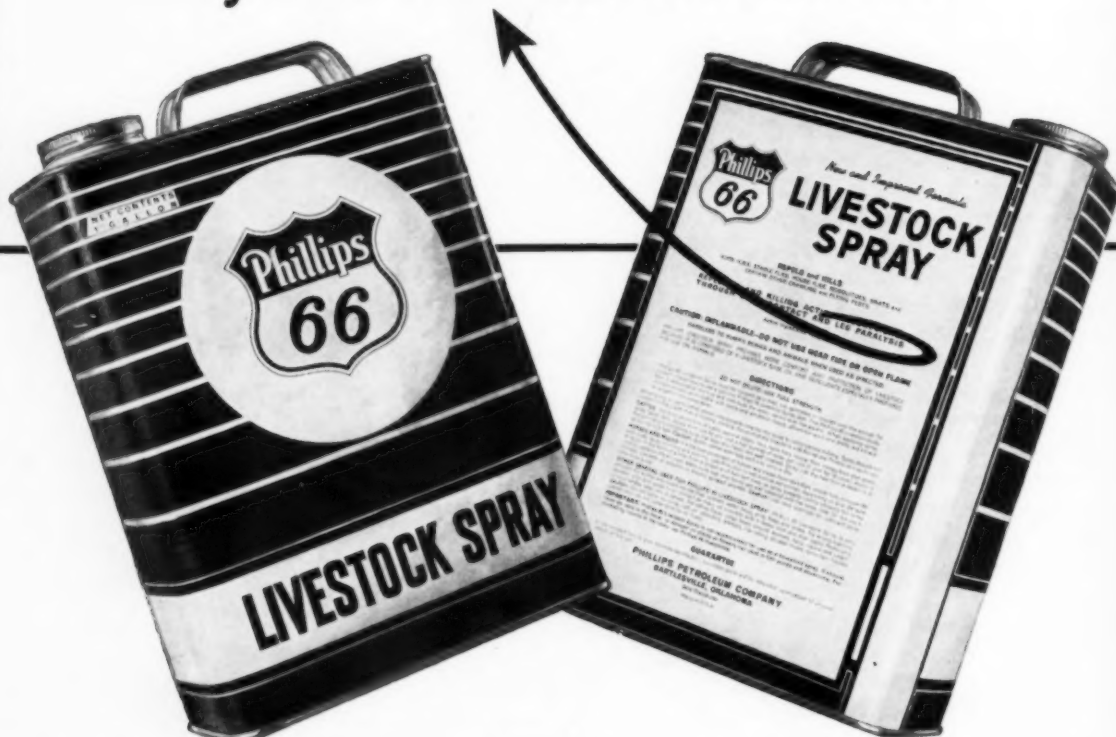
"This Chemical Age" by Williams Haynes is just off the press,

a 400-page book that reads like a novel but is in reality an exposition of the foundations and development of chemicals and chemistry in the service of mankind. A very human document is this latest Haynes book written not for the chemist but for the layman,—but not a chemist should miss reading it,—and reflecting a wad of close-up knowledge of chemical developments which the author has acquired during his twenty-five years in the midst of the chemical industry. From dyes to medicines, naval stores to synthetic camphor, rubber and synthetic rubber, rayons, plastics, metals, and synthetic everything, about men and companies, cartels and monopolies made and broken, success and failure,—all stirred up and presented in one intensely interesting volume. For those who own or hope to own stock in a chemical company or chemical enterprise anywhere, it is particularly recommended as illuminating reading. Bound in red cloth with glossary of common chemical and chemical industry terms. Sells for three-fifty. Publisher is Alfred A. Knopf, Inc., New York.

New Floor Sealer Specs

New Federal specifications for Varnish Type Floor Sealer (for wood and cork) Fed. Spec. TT-S-176a, superseding Fed. Spec. TT-S-176, were recently issued by the U. S. director of procurement, to become effective March 1, 1942. Principal innovation is the establishment of a second class of floor sealer with a minimum non-volatile content of 25 per cent, in addition to the former type with a minimum nonvolatile content of 40 per cent. The viscosity at 25° C. of floor sealers of class 2 shall be not more than 0.220 poise. Changes in detail requirements are as follows: the floor sealers shall set hard and tough in not more than 7 hours (old specifications allowed 18 hours); they shall pass a 100 per cent Kauri reduction test at 25° C. (old specifications called for a 50 per cent reduction test as a measure of toughness).

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Pathogenic Bacteria in Public Places

By William G. Walter and G. J. Hucker*

New York State Agricultural Experiment Station

PATHOGENIC microorganisms have been found for many years in the air, on floors and in common places where diseases have been prevalent. Recently considerable attention has been given to the presence of disease-producing bacteria in public places frequented by healthy individuals. It was felt worthy of consideration to investigate whether pathogenic organisms could be found on the floors of public rooms and in public restrooms. If such organisms could be isolated, this work was also to include a study of their survival and the effect of disinfectants when applied both in field and in laboratory tests.

Coliform Contamination in Rest Rooms

It is a well established fact that water polluted with sewage contains large numbers of bacteria—some of which may be harmful. A particular organism, *Escherichia coli*, not pathogenic itself, is used by health departments as an indication of fecal contamination when testing a water supply for its potability. In the first phase of this work which dealt with contamination in restrooms we sought this same index of contamination, *E. coli*. The procedure followed was to use sterile cotton swabs and thoroughly swab inside and outside door knobs, flush valves, hot and cold water faucets and toilet seats. The swab was then incubated in lactose broth and tubes showing gas production were generally streaked

onto eosin-methylene blue agar as a confirmatory indication of coliform contamination.

One hundred and ninety-four objects in 13 different rest rooms, including six women's and seven men's, were swabbed and the findings are shown in Table 1. It can readily be seen that coliform organisms were found on all types of fixtures tested, thus indicating the extent to which these bacteria may be spread. The most significant point of these data is the large number of positive indications of contamination on toilet seats and wooden doors leading from the closets which were opened by pushing. Approximately 64 per cent of the toilet seats in women's rest rooms showed contamination, while about 78 per cent in men's rooms were positive. No attempt is made to explain these differences.

The objects, other than wood, that were swabbed showed coliform contamination in about 29 per cent of the 59 fixtures in women's rooms, while in the men's rooms only 17 per cent of the 69 objects gave positive results.

These data indicate that coliform bacteria were found mostly on wooden toilet seats. It was also noted that toilet seats finished in light colors showed fewer cases of contamination than those of dark colors. This might indicate that light colored seats received greater care by the janitor since when soiled this was more noticeable.

The fact that the metallic articles in the restrooms did not show extensive contamination may possibly

be due to the toxic action of the metals.

To summarize this phase of the work it would appear that toilet seats are the chief sources of contamination in public restrooms and this fact has a public health significance since typhoid, paratyphoid and dysentery organisms may be deposited on their surfaces.

Beta Hemolytic Streptococci on Floors

The second part of these studies was concerned with the presence of beta hemolytic streptococci found in the sweepings of the floors from public rooms. Altho the causative agent of the common cold is not known, it has been definitely established that beta hemolytic streptococci may instigate sore throats, scarlet fever and certain respiratory diseases. Since these organisms have a public health significance, 113 attempts were made to isolate them from the sweepings of 37 different rooms in ten establishments which included six schools, a Y.M.C.A., a boy's dormitory, a hotel and a theater. In more than one-half of these rooms beta hemolytic streptococci were found by using special technics for isolation. Altho quantitative tests were not the primary purpose of this work, it soon became evident that these streptococci could not be isolated from every room, but were present in large numbers in certain rooms.

A seasonal variation was found to exist in isolating beta hemolytic streptococci. In the winter and early spring these microorganisms could be found consistently in a number of

* Before Natl. Assn. Insecticide & Disinfectant Mfrs., December 1, New York. Approved by the Director of the New York State Agricultural Experiment Station for publication as Journal Paper No. 483, January 7, 1942.

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rooms but with the advent of warm weather such isolations became impossible. It is perhaps natural to expect that there would be fewer beta hemolytic streptococci on floors when the individuals using the rooms were in better health, as generally happens in summer.

Having established the fact that beta hemolytic streptococci could be isolated from the floors of public rooms, a representative number of cultures were studied physiologically and serologically and were found to belong to Lancefield's groups A, B, C and G. The fact that approximately one-half of the cultures studied in detail fell into group A which contains human pathogens responsible for sore throats, scarlet fever, and respiratory diseases clearly illustrates the sanitary significance of such organisms in public places.

A culture isolated from the theater was inoculated into sterile dust and found to survive for more than five days, the duration of the test. Other investigators have reported that such organisms may remain viable and virulent for as long as ten to twenty-five days.

Since disease-producing streptococci, which could survive for more than five days, the equivalent of a school week, had been isolated from floors, the question arose as to whether the janitor's routine sweeping was efficient in removing the hemolytic streptococci that might have settled onto the floor during the day. Schoolroom floors were resweped at least once and sometimes twice after the janitor's daily sweeping, and in all instances some beta hemolytic streptococci could be recovered in those rooms where they had been found previously in relatively large numbers.

Since routine sweepings would not remove pathogenic organisms, mopping experiments were performed in schoolrooms. One-half of the room was mopped with plain water and the other half with a disinfectant solution. After the floor had dried, sterile sand was sprinkled over the entire surface and each half of the

Table 1—Summary of Results from Swabbing Objects in Men's and Women's Rest Rooms

OBJECT SWABBED	GAS PRODUCTION IN LACTOSE BROTH			
	Men's Room		Ladies' Room	
	Number tested	Positive	Number tested	Positive
Wooden toilet seats.....	23	22	28	18
Wooden doors	5	4	5	3
Brass door knobs.....	23	4	18	3
Chromium, porcelain and nickel toilet and urinal flush valves; hot and cold water faucets....	46	6	41	14
TOTAL	102	36	92	38

floor resweped. In the limited number of tests made, both mopping procedures were efficient in reducing the total number of organisms present. This reduction was probably due to a mechanical removal of organisms. However, bacteriological tests made of the solutions used for mopping showed a greater reduction of total numbers of organisms in the disinfectant solution than in the plain water solution. This fact is significant since the same water is frequently used in mopping several rooms and provides an opportunity for contaminating floors not previously harboring pathogenic organisms.

Laboratory Experiments

Laboratory experiments were performed in which broth cultures of

a streptococcus belonging to Lancefield's group A, previously isolated from a schoolroom floor, and *Escherichia coli* were spread over strips of varnished oak flooring covering an area 21½" x 12". After the inoculum had dried, disinfectants containing cresylic acid, coal tar, and pine oil, phenol and tap water were applied to the same surfaces. When at least ten minutes of contact had elapsed, the boards were swabbed and the contents of the dilution tubes plated using blood agar for the streptococcus and tryptone-glucose-beef-extract agar for the coliform organism.

The number of organisms surviving was determined by counting the colonies developing after 18

Table 2—Effect of Applying Varying Amounts of Disinfectants to Boards Previously Inoculated with Hemolytic Streptococci

Board Number	Dilution and type of disinfectant	Amount of disinfectant	Average number of beta hemolytic colonies
1	Control	—	T.C.*
4	1:100 cresylic acid	0.1 ml.	525
5	1:200 coal tar	0.1 ml.	2,600
6	1:90 pine oil	0.1 ml.	>10,000
8	5% phenol	0.1 ml.	2,250
9	Tap water	0.1 ml.	>14,800
10	Control	—	T.C.
11	Control	—	T.C.
12	1:100 cresylic acid	0.4 ml.	140
13	1:200 coal tar	0.4 ml.	10
14	1:90 pine oil	0.4 ml.	415
18	5% phenol	0.4 ml.	0
16	Tap water	0.4 ml.	T.C.
17	Control	—	T.C.
21	Control	—	T.C.
24	1:100 cresylic acid	0.8 ml.	5
25	1:200 coal tar	0.8 ml.	0
26	1:90 pine oil	0.8 ml.	0
28	5% phenol	0.8 ml.	0
30	Tap water	0.8 ml.	T.C.
31	Control	—	T.C.

* T.C. = Plate too crowded to count.
More than 50,000 per board.

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to 22 hours incubation at 32° C., and rechecking these counts after 48 hours.

At the start, seven boards were inoculated with the streptococcus culture and left at room temperature. Viable organisms were still present when the last test was made after 31 hours. This indicated that the culture used was able to survive in a dry condition throughout the period being used in these experiments. A number of tests showed that 0.1 ml. of culture followed by 0.1 ml. of disinfectant was more effective in reducing the number of organisms on the boards than was tap water. This amount of disinfectant was not sufficient to destroy all of the organisms present, and therefore additional tests were made, using larger volumes of the disinfectant solutions.

Table 2 shows the results obtained when three series of boards were contaminated with 0.1 ml. of the streptococcus culture and after ten minutes, 0.1, 0.4 and 0.8 mls. of disinfectants added. These disinfectants representing the various commercial types available were diluted 20 times according to the stated phenol coefficient. In all cases it will be noted that the application of a disinfectant reduced the number of organisms below the number surviving on the control boards or the water treated boards, and as would be expected, greater volumes increased the effectiveness of the disinfectants. No one disinfectant consistently proved to be more efficient than another in any of these tests.

Table 3 gives the results of an experiment in which 0.1 ml. of a 23 hour culture of *E. coli* was applied to the surface of the boards. After 10 minutes 0.3 ml. of the disinfectants was applied to the first series of boards and 0.6 ml. to the second series. Again it will be noted that the disinfectants have markedly reduced the number of organisms on the boards.

The question arose as to the phenol resistance of the streptococcus cultures being used in these experiments. Twenty-five cultures which

Table 3—Effect of Applying Varying Amounts of Disinfectants to Boards Previously Inoculated with *Escherichia Coli*

Board Number	Dilution and type of disinfectant	Amount of disinfectant	Average number of coliform colonies
15	Control	—	T.C.*
16	1:100 cresylic acid	0.3 ml.	2,090
17	1:200 coal tar	0.3 ml.	340
18	1:90 pine oil	0.3 ml.	2,800
19	5% phenol	0.3 ml.	295
20	Tap water	0.3 ml.	T.C.
21	Control	—	T.C.
22	Control	—	T.C.
23	1:100 cresylic acid	0.6 ml.	145
24	1:200 coal tar	0.6 ml.	150
25	1:90 pine oil	0.6 ml.	10
26	5% phenol	0.6 ml.	400
27	Tap water	0.6 ml.	T.C.
28	Control	—	T.C.

* T.C. = Plate too crowded to count.
More than 50,000 per board.

had been isolated from floors of schoolrooms, a theater, and a hotel lobby were tested to note their resistance to 5 per cent phenol. Some of these cultures showed growth at five minutes, but not at ten in dilutions as low as 1:30, and as high as 1:70. The majority, however, were able to grow in dilutions of 1:40 to 1:60.

Table 4 shows the phenol dilution inhibiting the growth of ten cultures of beta hemolytic streptococci belonging in Lancefield's groups A, B and C. Attention is drawn to the fact that the first culture listed is that used in the laboratory experiments.

From the data obtained it is apparent that the beta hemolytic streptococcus used in the laboratory tests was fairly resistant to phenol. In general, the application of disinfectants in volumes sufficient to thoroughly wet the surface of the boards was effective in markedly reducing

the number of microorganisms as compared to the number surviving on the controls and those receiving a water treatment.

General Discussion

Field and laboratory experiments have been performed to note the presence of bacteria in public places responsible for human diseases. A study was also made of the survival of such organisms and the effect of applying disinfectants to the surfaces harboring these microorganisms.

Coliform bacteria, indices of fecal contamination, were found on all types of the 194 fixtures swabbed in 13 public restrooms. Toilet seats and wooden doors of closets were found to be the most frequently contaminated, altho the presence of these organisms on other objects indicated the extent to which these bacteria could be carried from the main

Table 4—Dilutions of Phenol Inhibiting Growth of Hemolytic Streptococci

Source	dilution Phenol	Growth after exposure to disinfectant		
		5 Min.	10 Min.	15 Min.
School	1:40	+	—	—
School	1:30	—	—	—
School	1:40	+	+	+
School	1:50	+	+	—
School	1:30	—	—	—
School	1:40	+	+	+
School	1:60	—	—	—
School	1:70	+	+	+
School	1:60	+	+	—
Boy's dormitory	1:30	+	—	—
Hotel	1:30	+	—	—
Hotel	1:30	+	—	—



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BRIGHT BEAUTY, for instance, buffs to a sparkling luster that would be impossible to reach with a self-polishing wax like SPARX. At the same time, SPARX' ability to stand up under frequent damp moppings or repeated exposure to wet traffic assumes equal importance when conditions call for exceptional water resistance.

Since SPARX is on the hard side, it does not scuff or mar as easily and deeply and affords extra stamina when floors are subjected to unusually heavy wear and tear. On the other hand, BRIGHT BEAUTY'S slightly softer body makes for easier blending of traffic marks. It is readily buffed to its original brilliance of luster; scuffs and scratches are quickly rubbed out.

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source. In general, coliform organisms were found less frequently on light colored toilet seats than on dark colored ones. It is possible that light colored seats may receive a more thorough cleaning by the janitor since when soiled, they are more noticeable. The fact that typhoid, paratyphoid, dysentery and other intestinal pathogens may be present when coliform contamination exists increases the sanitary significance of these findings.

The presence of beta hemolytic streptococci, the causative agents of sore throats, scarlet fever and certain respiratory diseases, has been investigated in 37 rooms in six schools, a boys' dormitory, a theater and a hotel. These streptococci, also possible indices of other streptococci infections of the naso-pharynx and of respiratory diseases caused by pneumococci, were found in more than one-half of the rooms during the winter months but could not be isolated during the summer.

Ten of the 17 cultures whose physiological and serological characteristics were studied in detail belonged to groups responsible for causing diseases. These organisms also proved to be relatively resistant to phenol.

Mopping schoolroom floors with plain water and with disinfectants proved effective in reducing the total number of organisms, probably by mechanical action. Tests made of the mopping solutions, however, showed the advantage of using disinfectants which kept the total number of organisms at an appreciably lower level than did the plain water. This would lessen the possibility of contaminating other rooms which might be mopped subsequently.

Laboratory tests have been made in which pieces of oak flooring were inoculated with a streptococcus culture (group A) and an *E. coli* culture followed by treating with disinfectants of the cresylic acid, coal tar and pine oil groups, phenol and water.

In nearly all cases the disinfectants proved more effective than

the plain water treatment or the boards receiving no treatment, which served as controls. This was particularly true when the volume of disinfectant was increased so as to thoroughly wet the surface. None of the results obtained in these laboratory experiments indicated that one type of disinfectant was consistently more effective than another.

Summary

Pathogenic streptococci were found relatively widespread in the floor sweepings of public places, particularly schools. Further investigations may indicate a definite relation between the presence of these disease producing microorganisms and the incidence of respiratory infections among school children.

Isolated streptococci have been found to survive for more than five days when artificially inoculated into sterile dry dust and also to survive for more than 31 hours when spread over the surface of floor boards and left at room temperature. These organisms were also found to be relatively resistant to high concentrations of phenol.

The effect of applying water and disinfectants when mopping schoolroom floors has been studied and both procedures have been found mechanically effective in reducing the total number of organisms present, altho the disinfectant mopping solutions contained fewer organisms which would minimize the possibility of contaminating subsequent rooms being mopped.

Coliform organisms, indices of fecal contamination, have been found on all fixtures tested in public restrooms altho toilet seats were the main source.

Laboratory experiments have shown that cresylic acid, coal tar, pine oil and phenol disinfectants are effective in destroying most of the streptococci and coliform organisms inoculated onto oak flooring when a volume sufficient to thoroughly wet the surface is applied. No one disinfectant has been found to be consistently more effective than another in these tests.

The public health significance of these disease-producing organisms in public places is becoming an increasingly important problem for health authorities.

Mildew, Moth Repellents

Many chemical agents provide protection against mildew. Some of the satisfactory treatments for fabrics are an alkylated dimethyl benzyl ammonium phosphate alone and with an acrylic resin, salicylanilide, *ortho*-phenylphenol, 2-chloro-*ortho*-phenylphenol, pentachlorophenol, sodium pentachlorophenolate, thymol with phenyl salicylate, chlorothymol, the dye catechu, many organometallic compounds such as copper propionyl acetate, *para*-tolyl mercury salicylate, cadmium and copper soaps, and inorganic salts. Most of these substances are commercial developments and are available for general use.

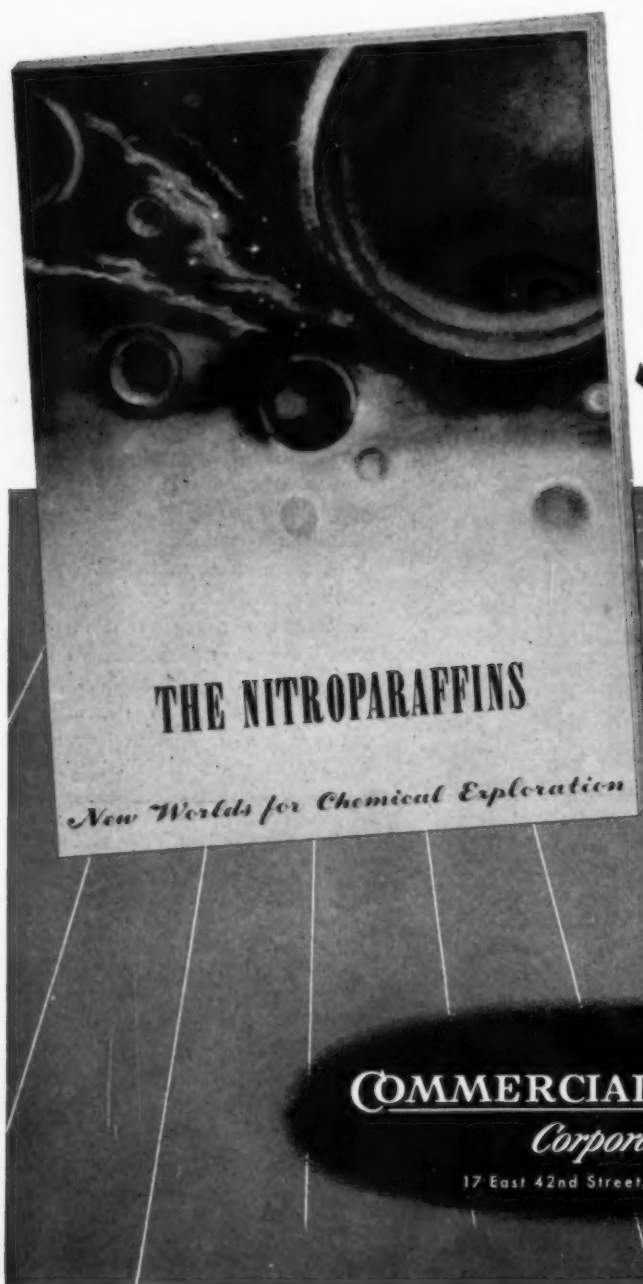
In mothproofing, repellents are usually a metal combination such as aluminum, magnesium or ammonium, of sodium silicofluoride, or sodium silicofluoride itself. Another repellent is dixylylguanidine, which, dissolved in naphtha, is applied by a pressure spray to fabrics and upholstery. Aliphatic thiocyanates in a kerosene base are being introduced to the home as mothproofing sprays. The thiocyanate is a contact poison and must hit the larvae in order to be effective. F. J. Van Antwerpen. *Ind. Eng. Chem.* 33, 1514-18 (1941).

Silverfish Control

Sodium fluoride and sodium fluosilicate have been used in the past to control silverfish but were considered only partially effective. If these poisons are combined with pyrethrum, the lethal result to the pests is enhanced. Treated "cards" sold for silverfish control are said to have little effect. Their diet preference is rayon, cotton, linen and vegetable fibers rather than silk or wool, which explains their choice of libraries and linen closets for habitation. *Science Supplement* 94, August 22, 11 (1941).

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PEST CONTROL ACT

THE legislation which in Canada deals with insecticides, disinfectants, fungicides, fumigants, etc., is the Pest Control Products Act. It is the successor of an Act introduced in 1927 for the control of agricultural poisons. Due to certain anomalies which developed in its enforcement, it was amended to include all pesticides. Its general purpose is to prevent fraud, whether by the sale of inferior products or by misrepresentation. The need for it is indicated by the fact that when the Act was passed many products were immediately withdrawn from the market, while over 100 others have since been rejected upon application for registration.

During 1941 the total registrations were 956, of which insecticides, including fungicides and fumigants, number 706, and disinfectants 127, so that about 87 per cent are products of interest to members of your association.*

By law a pest control product is: "Any product used, or represented as a means, for preventing, destroying, repelling, mitigating or controlling, directly or indirectly, any insect, fungus, bacterial organism, virus, weed, rodent, or other plant or animal pest." It is further defined by regulation as: "Any product that may be classified as an insecticide, vermicide or vermifuge, fungicide, germicide or disinfectant, avicide, herbicide or weed killer, rodenticide, or any pesticide or product used in pest control." In another regulation a pest is described as: "Every injuri-

ous, noxious or troublesome species of plant or animal life"; while further clarification is afforded by a regulation allowing for certain exemptions from the Act provided that products are not advertised or sold "for the control of pests affecting agriculture, industry or households." All adjuvants are classed as pest control products.

Other regulations extend authority over products used by pest control operators and over articles treated against pests, to the extent that all claims may be reviewed and, if of a questionable character, substantiation of them may be demanded.

The Act does not apply to materials intended for manufacturing purposes, to unsolicited prescriptions; and in practice it has not been applied to medical disinfectants or to disinfectants intended for personal use.

The first step in control is registration. To obtain a registration certificate, applicants must disclose in confidence the entire formula of the product, using the common name for each ingredient. Complete directions for use and all labels must accompany each application. Any other relevant printed matter is required as every claim is regarded as a guarantee, subject to substantiation.

This material is sent to the appropriate branch of Science Service for review. It may be approved and often is, without alteration. If directions are not entirely satisfactory, it is returned to the administration office with suitable changes suggested. If the product is below minimum strength, or if it is not strong

enough for the particular task named by the applicant, registration is refused. This action is not necessarily final, as the manufacturer of any product whose merits are questioned may arrange for its test under practical conditions in cooperation with the Department. Where refusal is the result of exaggerated claims applicants may present evidence in support of them, but such evidence must be scientifically acceptable.

Last year, (1940), 75 products were rejected. Of these, about 30 were re-formulated and later approved for registration. This year, (1941), 30 have been rejected.

Registration is always withheld when a formula is incapable of doing the work claimed for it. It is withheld when the product is dangerous to use, as in the case of bed-bug poisons based on highly inflammable liquids, corrosive sublimate as a bed-bug poison, and carbon bisulfide as a grain fumigant. It is also withheld if the degree of control obtained is low, as with phosphorus offered for cockroach control.

It is important that regulative work of this kind shall keep in step with the findings of research and consequently there is reluctance to grant registration for products which might induce the public to depart from recommended treatments known to be effective.

Before the certificate of registration is issued the labels are scrutinized to ensure that they comply with the law. In this way manufacturers and repackagers are guided with a minimum of difficulty into conformity, and very extensive changes through-

*Before Natl. Assn. Insecticide & Disinfectant Mfrs., New York, December 1-2, 1941.

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out the trade have been achieved in a comparatively short time.

Labels must show the registrant's name and address; the approved brand name; the registration number followed by the initials P.C.P. Act, the word "Guarantee" and the approved statement; the conventional poison particulars, where necessary, including the legend in capital letters "CALL A DOCTOR IN CASE OF ACCIDENT," and lastly, a statement of net contents.

The brand name must be informative. If the substance is practically pure, its common name must be included, as say, "Blank Sodium Fluoride." If it is a mixture, or is not pure, the word insecticide, fumigant, or some equally descriptive term must be used. This idea is not carried to excess, however, and a name like "Rat-Kill" is acceptable. Disinfectants derived from tar acids must be called, say "Blank Tar Acid Disinfectant."

Guarantees are expressed in chemical terms where this is the best method, but only the active substances are declared, using the common names. No declaration of inert matter is permitted. Where a manufacturer pleads that a chemical statement would cause him to expose a secret formula, he may be allowed to use the biological form reserved for products containing pyrethrum, derris, red squill or ingredients difficult to determine chemically. In fact, there is an inclination to get away from chemical guarantees entirely unless they are essential for the best use of a product, as, under the law as administered, a worthless article cannot be sold legally. The biological guarantee is: "Satisfactory biological effectiveness for the purposes claimed when used according to directions." Of course tar acid disinfectants bear a guarantee of phenol coefficient.

The correct marking of volume has been a difficult problem. The legal measure in Canada is Imperial and based on 160 fluid ounces to the gallon. Products originating in the U. S. naturally come into Canada marked with measures based on a gal-

lon of 128 U. S. fluid ounces. It is not surprising that the smaller gallon is often represented as being a Canadian gallon, nor is it surprising that still smaller alleged gallons have been found to contain 128 Imperial fluid ounces, or about 5 per cent less than the U. S. legal gallon. To eliminate this multiplication of sizes and consequent misrepresentation between the 16 and 160 Imperial fluid ounce sizes, it has been found necessary to order that only eight sizes shall be sold, and that these shall be marked plainly as containing so many fluid ounces and the correct fraction of pint, quart or gallon as the case may be.

In reviewing labels each is treated on its merits. There is no general schedule of unacceptable terms nor any definition of what constitutes misbranding. However, statements such as "Beware of imitations" are rarely justifiable, and their removal is requested. Superlatives, such as "best in the world," are usually deleted and so are the words "new" and "improved" since they can be accurate only for a relatively short period of time. Intimations of government approval or government use also are forbidden. One rather surprising example of an objectionable statement was: "The proprietors accept no responsibility whatever." Further objectionable wordings are the advertising of other products on containers, from which the public might conclude that satisfactory results could be obtained only if the advertised products were used as well. Brand names to which exception has been taken include the words "miracle," "marvel" and "magic."

THE final step in enforcement is inspection. The organization of the staff is difficult to describe accurately, but the work is under the immediate direction of the Chief, Inspection Services, Plant Products Division of the Department of Agriculture. Under him at headquarters are an Inspection Assistant and a Registration Assistant. The country is divided into eight districts with in-

spection staffs totalling between 50 to 60 including supervisors. A chemical laboratory is maintained at Ottawa while nine others are distributed across Canada. The methods of testing in these laboratories are those of the A.O.A.C.

Tar acid disinfectants may be tested at either of two government laboratories in Ottawa specializing in this work. A Peet-Grady Chamber has been constructed for the testing of products susceptible of such treatment and will go into operation as soon as authority can be obtained to staff it. For biological tests in general, the resources of Science Service are available and some ten laboratories have been used. In these laboratories, 72 workers have been gazetted as analysts.

Biological tests have been made apart from the determination of phenol coefficient and experimental use of the Peet-Grady Chamber. In the late winter months of 1941 warble powders were tested at the Live-stock Insect Investigation Station. In the spring, the lethal dose of strychnine for gopher poisons was determined at another station. Later in the year, red squill and some other mice poisons were tested by dosing test animals. The phosphorus poison just mentioned was tried in cockroach-infested premises in the manufacturer's city. This summer, mosquito repellents were tested by an entomologist who went into the bush and exposed himself for the purpose. Finally a moth-proofer of doubtful value was tested.

Outside of headquarters, the field staffs are expected to see that all pesticides on the market are registered. It is also their duty to take samples, and otherwise to enforce the law. The Pest Control Products Act contains a seizure clause which enables inspectors to detain any product sold in violation of the Act, at the risk and expense of the owner until full compliance is effected. If the owner fails to take satisfactory action within the space of three weeks, the goods may be confiscated. Inspectors do not usually resort to detention un-



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less it appears that persuasion is ineffective.

Where more drastic action is required, prosecution is undertaken. This is usually a last resort and offenders are first given every opportunity to comply with the law. An interesting case arose in Alberta in which a travelling salesman was selling a remarkable powder for the control of gophers. He said it did not poison but infected them with a disease which wiped out whole populations in their burrows, so that they would not be found lying about the farm premises. This was a smart thing to say, because his stuff was merely common salt, and no dead gophers would be found anyway. Since the man was itinerant, the R.C.M.P. were asked to catch him, and a long chase ensued in which his trail was found to stretch from Halifax to Vancouver. He was run down after about ten months, during which time he changed his occupation several times. He was charged with offences under this Act which cost him three months imprisonment.

Reputable manufacturers seldom come into serious conflict with the law.

Wetting Agents as Bactericides

Some of the commercial wetting agents have pronounced bactericidal properties and these properties are increased when the pH value of the solution is adjusted to the acid range. A considerable number of wetting agents adjusted to pH 4 show germicidal properties superior to those of the alkaline sodium hypochlorite solution so commonly used for sterilizing purposes. When conditions of preparation and application are well controlled, a 0.01 per cent concentration of the wetting agent at pH 4 with phosphoric acid can be employed. For general industrial use, 0.03-0.05 per cent of the wetting agent adjusted to this acidity is recommended.

The pH adjustment can be made with any acid, but phosphoric and gluconic are appropriate because of their low corrosiveness. Addition of sodium sulfate in concentrations

that reduce the wetting time also reduces the bactericidal power. Dairy utensils, milk cans and restaurant glassware are suitably sterilized by these agents. The wetting agents are more effective as bactericides at higher temperatures than at room temperature. The results indicate that anionic products in solution at pH 4 are equally effective against Gram-positive and Gram-negative organisms. One acidified cationic product showed excellent germicidal action against a Gram-positive culture. The acid solutions recommended are very much less corrosive than sodium hypochlorite solution. These solutions may be prepared at a cost of one-third to the same as that for sodium hypochlorite solution, depending on the margin of safety required in the plant. F. M. Scales and Muriel Kemp. *Assoc. Bull. (Internat. Assoc. Milk Dealers)* 33, 491-520 (1941).

New Fumigant

A new fumigant, 1, 1-dichloro-1-nitroethane, has given interesting results against insects. It is a colorless liquid with an ignition temperature such that it can be vaporized safely in buildings, vaporizing readily without the application of heat. Its odor is sufficiently pronounced to warn of its presence. It does not affect furs, dyed fabrics, wallpaper or metals except iron in highly humid atmospheres. Dried foodstuffs and cereals are not injured, but fresh fruits and plants in foliage are definitely injured. The gas is apparently safe to human beings. W. C. O'Kane and Howard W. Smith. *J. Econ. Entomol.* 34, 438-9 (1941).

Insecticide Analysis

A collaborative study was made of the determination of pyrethrin I in pyrethrum, derris and cubé, by the mercury reduction method and by Seil's method, also of pyrethrin II by Seil's method and, following determination of pyrethrin I by the mercury reduction method, by a modification of Seil's method. The results for pyrethrin I were in good agreement by both methods. Those for

pyrethrin II were in good agreement by the Seil method, but not so good by the modified Seil method. J. J. T. Graham. *J. Assoc. Official Agr. Chem.* 24, 651-3 (1941).

Bedbug Insecticide

The walls, floor, bed, furniture, etc., are first sprayed with an irritant. After 15-30 minutes, the insecticide proper is atomized within the room. The irritant is made as follows: 1 liter of a 15 per cent pyrethrum extract is mixed with 150 liters of highly refined mineral oil; to this mixture are added wintergreen oil 2 kilograms, citronella oil 1 kilogram, and *para*-dichlorobenzene 3 kilograms. The insecticide is made of: (15 per cent) pyrethrum extract 40 per cent, highly refined mineral oil 35 per cent, petroleum ether 20, and Turkey red oil (50 per cent) 5 per cent. The pyrethrum may be mixed with rotenone of suitable concentration and other irritants may be used. German Patent No. 701,761.

Sulfonium Disinfectants

Sulfonium compounds containing one or more high-molecular aliphatic or cycloaliphatic groups are effective disinfectants, for example dodecylmethylsulfonium methyl sulfate. The disinfectants are effective against *B. coli*, *B. typhus* and *B. diphtheriae*, staphylococci, etc. W. Neugebauer, to Kalle & Co. A.-G. German Patent No. 700,847.

Coloring Fluoride Powders

The coloring of fluoride powders used in cockroach control by aniline dyes applied in alcoholic solution reduced the dusting qualities and resulting efficiency of the powder. From one-half to 1 per cent of dry colors are recommended. Geo. E. Sanders. *Pests* 9, No. 7, 11 (1941).

Polishing Wax

A wax polish is prepared by the addition to a commercial pasty wax of up to 25 parts by weight of a granular wax having a melting point over 50° C. Paul Jend. German Patent No. 701,000.

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Write for information

Appoint NAIDM Committees

John Curlett, newly elected president of the National Association of Insecticide & Disinfectant Manufacturers, has recently announced the following personnel of committees of the association for the coming year:

ADVISORY COMMITTEE

Chairman: Ira P. MacNair, MacNair-Dorland Co.; W. J. Zick, Stanco, Inc.; R. H. Young, Davies-Young Soap Co.

ASSOCIATE MEMBERS COMMITTEE

Chairman: M. Lemmermeyer, Aromatic Products Inc.; J. B. Magnus, Magnus, Mabee & Reynard, Inc.; L. J. LaCava, Continental Can Co.

BY-LAWS COMMITTEE

Chairman: W. J. Zick, Stanco, Inc.; H. W. Hamilton, White Tar Co. of N. J.; John Powell, John Powell & Co.

DEFENSE PRIORITIES COMMITTEE

Chairman: J. L. Brenn, Huntington Laboratories, Inc.; H. M. Clark, Dr. Hess & Clark, Inc.; G. M. Baird, Baird & McGuire, Inc.; J. A. Marcuse, West Disinfecting Co.; R. H. Young, Davies-Young Soap Co.; M. L. Magee, T. F. Washburn Co.; W. J. Zick, Stanco, Inc.

DISINFECTANT SCIENTIFIC and STANDARDS COMMITTEE

Chairman: E. G. Klarmann, Lehn & Fink Products Corp.

Vice Chairman: C. L. Weirich, C. B. Dolge Co.; W. A. Hadfield, General Laboratories, Inc.; B. G. Philbrick, Skinner & Sherman, Inc.; G. F. Reddish, Lambert Pharmacal Co.; Jack C. Varley, Baird & McGuire, Inc.; Friar Thompson, Jr., Hercules Powder Co.; J. H. Carpenter, Koppers Co.; W. B. Eddy, Rochester Germicide Co.; D. K. Ballman, Dow Chemical Co.; Wm. Higburg, Reilly Tar & Chemical Co.

DISINFECTANT MARKETING COMMITTEE

Chairman: W. B. Eddy, Rochester Germicide Co.; Guy P. Robbins, Geo. H. Robbins Disinfecting Co.; J. H. Bender, Clarkson Chemical Co.

EXPORT STANDARDS COMMITTEE

Chairman: John A. Marcuse, West Disinfecting Co.; E. G. Klarmann, Lehn & Fink Products Corp.; G. A. Bowden, A. S. Boyle Co.; A. W. Morrison, Socony-Vacuum Oil Co.; O. M. Poole, Derris Inc.

INSECTICIDE MARKETING COMMITTEE

Chairman: A. W. Morrison, Socony-Vacuum Oil Co.; H. W. Moburg,

Rex Research Corp.; Wallace Thomas, Gulf Oil Corp.

MEMBERSHIP COMMITTEE

Chairman: Robert C. White, Jr., Robert C. White Co.; D. E. Clark, Dr. Hess & Clark, Inc.; A. L. van Ameringen, van Ameringen-Haebler Inc.; H. D. Cooper, Koppers Co.

INSECTICIDE SCIENTIFIC COMMITTEE

Chairman: A. E. Badertscher, McCormick & Co.

Vice Chairman: Franklin C. Nelson, Stanco, Inc.; W. A. Simanton, Gulf Research & Development Corp.; Alfred Weed, John Powell & Co.; A. J. Grady, Sinclair Refining Co.; C. R. Cleveland, Standard Oil Co. of Indiana; R. L. Speer, Shell Oil Co.; R. Wotherspoon, Derris, Inc.; M. Doner, J. R. Watkins Co.; G. A. Bowden, A. S. Boyle Co.; D. F. Murphy, Rohm & Haas Co.; H. E. Whitmire, Whitmire Research Corporation; W. A. McCauley, Velsicol Corp.; L. B. Kilgore, Kilgore Development Corp.; R. B. Stoddard, Dodge & Olcott.

INSECTICIDE SCIENTIFIC—SUB-COMMITTEES

Mothproofing Investigations

Chairman: F. W. Fletcher, Dow Chemical Co.; R. B. Trusler, Davies-Young Soap Co.; E. G. Klarmann, Lehn & Fink Products Corp.; C. S. Kimball, Foster D. Snell, Inc.; A. H. Goddin, duPont Pest Control Laboratory; D. F. Murphy, Rohm & Haas Co.; W. A. Simanton, Gulf Research & Development Corp.; Franklin C. Nelson, Stanco, Inc.; Alfred Weed, John Powell & Co.

CATTLE SPRAY COMMITTEE (Methods of Testing)

Chairman: Franklin C. Nelson, Stanco, Inc.; D. F. Murphy, Rohm & Haas Co.; C. R. Cleveland, Standard Oil Co. of Indiana; Fred Snyder,

Robert C. White, Jr. of Robert C. White Co., Philadelphia, was named as a new member of the N.A.I.D.M. board of directors at the recent New York meeting.



John Powell & Co.; Friar Thompson, Jr., Hercules Powder Co.; H. E. Whitmire, Whitmire Research Corp.

CHEMICAL ANALYSES COMMITTEE

Chairman: D. G. Hoyer, John Powell & Co.; Cady S. Corl, Allaire Woodward Co.; N. J. Gothard, Sinclair Refining Co.

Associated with the Insecticide Scientific Committees are the following advisors:

Dr. Lon A. Hawkins, In Charge, Division of Control Investigations, Bureau of Entomology & Plant Quarantine, U. S. Department of Agriculture, Washington, D. C.

Dr. E. R. McGovran, Control Investigations, Bureau of Entomology & Plant Quarantine, U. S. Department of Agriculture, Beltsville, Md.

Dr. F. L. Campbell, Professor of Entomology, Ohio State University, Columbus, Ohio.

Mr. Emory C. Cushing, Chief of Division of Insects Affecting Man and Animals, Bureau of Entomology & Plant Quarantine, U. S. Department of Agriculture, Washington, D. C.

LEGISLATIVE COMMITTEE

Chairman: C. L. Fardwell, McCormick & Co.; H. W. Hamilton, White Tar Co. of N. J.; R. H. Young, Davies-Young Soap Co.; H. C. Fuller.

RESEARCH PROGRAM COMMITTEE

Chairman: W. B. Eddy, Rochester Germicide Co.; C. L. Weirich, C. B. Dolge Co.; W. A. Hadfield, General Laboratories; G. F. Reddish, Lambert Pharmacal Co.; Jack C. Varley, Baird & McGuire, Inc., St. Louis.

SANITARY SPECIALTIES SCIENTIFIC COMMITTEE

Chairman: R. B. Trusler, Davies-Young Soap Co.; Melvin Fuld, Fuld Bros.; M. L. Magee, T. F. Washburn Co.; C. E. Smith, Socony-Vacuum Oil Co.; Alexander Fabry, American Disinfecting Co.; J. H. Lawson, Federal Varnish Co.; Wm. Pollnow, Vestal Chemical Co.; C. S. Kimball, Foster D. Snell, Inc.; L. D. Benedict, Plunkett Chemical Co.

SANITARY SPECIALTIES MARKETING COMMITTEE

Chairman: Henry J. Brownstein, Hyson Products Co.; John C. Nelson, The Selig Co.; Wm. Pollnow, Vestal Chemical Co.; M. J. Flanagan, Federal Varnish Co.

SPECIFICATIONS and PUBLIC PURCHASES COMMITTEE

Chairman: Gordon M. Baird, Baird & McGuire, Inc.; R. O. Cowin, Standard Oil Co. (Ohio); Wallace Thomas, Gulf Oil Corp.



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NEWS

NAIDM Selects Hershey

The Hotel Hershey, Hershey, Pa., was selected by a vote of the membership of the National Association of Insecticide and Disinfectant Manufacturers as the scene of its 1942 summer meeting, which is to be held June 8 and 9. H. W. Hamilton, White Tar Co., secretary of the N.A.I.D.M., announced recently. Hershey is about 14 miles east of Harrisburg, Pa. H. M. Clark, Dr. Hess & Clark, Inc., will head the Entertainment Committee, and R. O. Cowin, Standard Oil of Ohio, will head the Program Committee.

Survey Pyrethrum Stocks

A survey of the stock position and consumption of pyrethrum is currently undertaken by the chemicals and allied products branch, OPM, in connection with its administration of preference order P-87. Manufacturers of insecticides, germicides and fungicides are being asked to supply the chemicals branch with the following information: (1) Inventory of stocks on January 1, 1942; (2) Commitments for 1942; (3) Amounts consumed during 1941 and estimated consumption for agricultural purposes during 1942, together with any further information which will be of assistance in determining the supply position of pyrethrum and allied products.

Lehn & Fink Sales Mgr. Dies

J. Lambert Simmons, southeastern sales manager for Lehn & Fink Products Corp., died January 19 at Atlanta of injuries suffered in an automobile accident. Mr. Simmons was forty years old.

Union Move in N. Y.

A move to unionize workers in the potash soap and sanitary products

field has been reported from the New York area during the past few weeks. An organizer, Henry Wish, formerly employed as a salesman with Naphthole, Inc., is the active figure in the movement, attempting to add membership to Federal Labor Union 22658 affiliated with the A. F. of L.



A Pacific coast branch office of R. M. Hollingshead Corp., Camden, N. J., will be established this month at San Francisco by W. F. Plowfield, director of sales, who makes his headquarters at Camden. Mr. Plowfield leaves for the Coast on February 15th.

DCAT Dinner March 12

The 17th annual banquet of the Drug, Chemical and Allied Trades section of the New York Board of Trade will be held at the Waldorf-Astoria Hotel, New York, on March 12. The entire net income from this year's banquet is to be donated to the American Red Cross.

Dr. Robert L. Swain, chairman of the publicity committee for the banquet, announced recently that the following key men had been selected in their respective cities to organize delegations to attend the banquet: Baltimore — George Armor, McCormick & Co., and Frank E. Black, Baltimore Drug Exchange; Boston — F. J. Hailer, United Drug Co.; Buffalo — Hoyt Shehan, Wildroot Co.;

Chicago — Ray Whidden, Bauer & Black, and Clarence Morgan, Clarence Morgan, Inc.; Cincinnati — John E. Rudolph, Station WLW; Cleveland — Henry A. Nelson, Chemical Supply Co.; Detroit — Maison G. de Navarre, Maison G. deNavarre Associates; Pittsburgh — J. C. Ackerman, J. C. Ackerman Co., and James Freeman, H. B. Gilmore Co.; Philadelphia — Ray Anderson, Merck & Co., and L. S. Lloyd, Alex C. Fergusson Co.; St. Louis — H. L. Dahm, G. S. Robbins & Co.

The program of speakers for the banquet has not yet been arranged in its final form. Last year, as those attending the banquet will remember, Paul V. McNutt, federal security administrator, was the principal guest speaker at the DCAT banquet.

Louisiana PCO Conference

Reports on practical pest control took precedence over technical papers at the 4th annual southern Pest Control Operators conference held January 26-28 at Louisiana State University. The meeting was sponsored by L. S. U. in cooperation with the National Pest Control Association.

N.S.S.A. to Meet April 20-22

The annual convention of the National Sanitary Supply Association, Inc., Milwaukee, is to be held April 20-22 at the Hotel Morrison in Chicago.

Economic Entomologists Meet

The 53rd annual meeting of the American Association of Economic Entomologists was held at the St. Francis Hotel, San Francisco, December 29 to January 1. Among the papers presented at the meeting were reports on the control of various agricultural pests. Also of note were papers on the cost of inadequate knowledge of control measures by E. P. Felt, of Stamford, Conn.; "Some Problems Pertaining to Use of Light Traps in Insect Control" by W. B. Herms, of Berkeley, Cal., and "Recovery of Houseflies from the Effects of Pyrethrum

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and 'Lethane' at Various Temperatures" by Craig Eagleson, of Dallas. The four-day meeting was concluded with a circle tour of the San Francisco bay region, a visit to the University of California at Berkeley, and the annual dinner sponsored jointly by the Entomological Society of America and the A. A. E. E. at the St. Francis Hotel.

Hollingshead Appoints

Edward Cole formerly associated with Vestal Chemical Laboratories, has just been appointed by R. M. Hollingshead Corp., Camden, N. J., as regional manager in New England, with headquarters in Boston, the company announces. Victor Kamm, formerly with C. B. Dolge Co., was appointed regional manager in Buffalo and the surrounding territory.

Amer.-British Names Dyne

Godfrey W. Dyne was recently appointed vice-president of American-British Chemical Supplies, Inc., New York, the directors of the company announced. A native of England, Mr. Dyne was educated at London University, graduating in 1911 with honors in chemistry. In 1912, he joined T. M. Duché & Sons, manufacturers of gelatine and glue and was transferred to their New York branch in 1913, remaining with them until 1928. In that year he joined American-British Chemical Supplies, Inc., making it one of the principal factors in Argentine casein as well as domestic casein. Since 1931, when the associated company, Kay Fries Chemicals, Inc., was formed, Mr. Dyne has devoted special attention to the market development and distribution of aromatics, solvents, pharmaceuticals and other intermediate chemicals manufactured by the company.

Prominent Specialty Moves

Prominent Specialty Co., sanitary products, New York, formerly located at 160 Fifth Ave., has just moved its office, factory and warehouse to 777 Broadway.

Form Grand Rapids Chemical

Grand Rapids Chemical Corp., Grand Rapids, Mich., was formed recently to manufacture a line of household insecticides, under the trade name "Pestex," by three former executives of Tanglefoot Co., same city. Officers and founders of the organization



W. J. WAGNER

are: William J. Wagner, president, who spent more than 30 years with Tanglefoot the last 12 of which were



M. T. BERRY

as executive vice-president and general manager; Mathew T. Berry, treasurer, who was also with Tanglefoot more than 30 years and served as sales and advertising manager since 1930; Benjamin E. Kuyers, secretary, who was chief chemist and purchasing agent with Tanglefoot since 1910. The new firm is already in production and is making deliveries, according to Mr. Wagner. Its line includes two models of electric power sprayers, two concentrates, a fly spray and a stock spray. The Grand Rapids Chemical Corp. plant is located at 5 Colfax St., N. E., and is equipped with a railroad siding.



B. E. KUYERS

Modify Steel Drum Schedule

Modification of the price schedule covering used steel barrels or drums to assure dealers of an adequate operating margin was announced January 9, by Leon Henderson, price administrator. The effect of the change is to establish a ceiling price of \$1.25 each for "raw" used steel barrels or drums (50- to 55-gallons, 18 gauge steel) when sold by the emptier to "any person." Formerly the schedule imposed this ceil-

ing price only when such drums were sold direct to users. This left sales by emptiers to others than users free of any restrictions. Prices were bid up and, since peddlers and dealers could charge only \$1.60 upon resale, their operating margins narrowed to the point that they were in danger of being forced out of business, the OPA stated.

In another revision of the original steel drum schedule, the specific date, October 1, 1941, is inserted in order to stabilize the base for determining the prices of used drums of other sizes, the ceiling prices being set at 80 per cent of the prices prevailing on October 1. It is also stated that the lower of the prices quoted by Rheem Manufacturing Co., and Wheeling Corrugating Co. on that date must apply as the base for determining the ceiling price.

Agri. Lab. Advances Weaver

Merrell G. Weaver, in charge of sales promotion and advertising for Agricultural Laboratories, Inc., Columbus, Ohio, has just taken over new duties with Columbus Coated Fabrics Corp., oil cloth manufacturer, whose vice-president and general manager, H. E. Nesbitt, is also president of Agricultural Laboratories. Prior to his association with Agricultural Laboratories, Mr. Weaver was connected with McQueen Bacteria Co., as secretary and sales promotion manager, and joined Agricultural Labs. when that company purchased the assets of the McQueen company.

Blue Wonder Co. Moves

Blue Wonder Co., floor cleaning and maintenance products, New York, is now established in new and larger quarters at 12-14 West 18th St. Former address of the company was 1123 Broadway.

Orkin Exterminating Co. Moves

Orkin Exterminating Co., Birmingham, Ala., has just moved to larger quarters at 101 South 20th St. Former address of the company was 119 North 21st St.

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who want their homes



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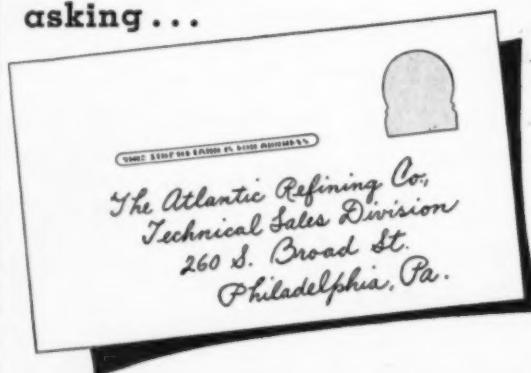
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Bank Reappoints McCormick

Charles P. McCormick, president of McCormick & Company, Baltimore, was recently reappointed as a director of the Federal Reserve Bank of Richmond, Va., for a term of three years. Mr. McCormick has also served for a number of years as director of the Equitable Trust Co. of Baltimore and the Eutaw Savings Bank of Baltimore and as director and chairman of the board of the Baltimore branch of the Federal Reserve Bank. He was appointed three years ago as a director of the Federal Reserve Bank of Richmond. In addition to these banking duties, Mr. McCormick finds time for his work with the United States Chamber of Commerce, the Baltimore Criminal Justice Commission and the Baltimore Association of Commerce.

Sees Insecticide Shortage

A prediction that shortages of insecticide raw materials will create a problem in food production in the United States was voiced recently by A. J. Flebut, California Spray Chemical Corp., and reported in the San Francisco *Chronicle*. Mr. Flebut mentioned that needs for copper, fluorine, arsenic, zinc and nicotine by war industries and for lease-lend shipments will result in serious shortages of insecticides. "Production of many of these insecticides," he is reported to have said, "will be hampered by shortages of nitric acid, acetic acid,

There's talent in this group. Members of the Boston branch office of Rochester Germicide Co., Rochester, N. Y., meeting for their annual banquet on January 12, passed up the customary professional entertainment this year and amused themselves with amateur acts by their own group.

hydrofluoric acid and other intermediate agents now engulfed by war industries." To quote further from the report:

"Rotenone, now available to last through this spring, used to be brought primarily from Malaya. Now specialists are attempting to get substitute sources from cubé, timbo and barbasco plants from the Amazon valley in South America. Already manufacturers of fly sprays are removing rotenone from their formulas. A shortage of this substance would virtually wreck the pea crop in Oregon, Washington and Idaho. Pyrethrum, once brought from Japan and more recently from Kenya, is believed to be available in this country in amounts sufficient for only one year."

J. N. Davies Joins Aridor

J. N. Davies, formerly sales manager of Henry Barroll & Co., New York, manufacturers of pouring nozzles for cans, has just become New York representative of Aridor Co., Chicago. His territory also includes the New England states. The New York office of the company is at 100 E. 42nd St.

Ends "D-X" Claims

B. G. Pratt Co., New York, engaged in the manufacture and sale of insecticides including a preparation called "D-X," recently made an agreement with the Federal Trade Commission to cease representing that the U. S. Department of Agriculture has in two consecutive seasons found that a spray containing "D-X" and arsenate of lead was the most effective spray for Japanese beetles.

Na₂SiF₆ As NaF Substitute

Information on the use of sodium silico fluoride as a substitute for sodium fluoride is given in a recent bulletin of the National Pest Control Association, as follows: sodium silico fluoride is not as fluffy as sodium fluoride, but is improved by the addition of some filler such as pyrophyllite; sodium silico fluoride is 97 to 99 per cent pure Na₂SiF₆; 90 per cent will pass 200 mesh and all will pass 20 mesh; it is produced only in white so that those who operate where tinting is mandatory must do their own coloring; the price is 11 cents a pound in barrels of 375 pounds, f.o.b. plant. Use of the pyrophyllite, as suggested above, to the extent of 25 per cent, is said to improve the physical characteristics of the sodium silico fluoride without reducing its toxicity.

Barium carbonate is recommended as a substitute for sodium fluoride in a powdered oatmeal bait for silverfish and firebrat, a development of Prof. C. H. Richardson, Iowa

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State College. The suggested powdered bait is composed of 200 parts of finely ground oatmeal, 16 parts of barium carbonate, 10 parts of powdered sugar and 5 parts of powdered common salt.

Exterminators Sign With Union

A new union contract has just been negotiated by New York exterminating concerns with Local 155, Exterminators & Fumigators, Building Service Industries, AFL, providing for an increase of \$1 a week in wages for 1942. Covering 1942 and 1943, the contract provides for a wage of \$33 the first year and \$34 the following year. A daily wage of \$7 is fixed as compared with the present single day wage of \$6.50. A sliding scale is set for apprentices, starting at \$21 for the first six months and working up to the full wage level after 21 months. The contract was negotiated through the medium of the New York State Mediation Board and went into effect as of January 1. It has been accepted by members of both New York associations, the Professional Exterminators Association and the New York Pest Control Association.

Monsanto Wins Navy Award

The privilege of flying the Navy's "E" pennant and the Navy bureau of ordnance flag from the flagstaff of the general office of Monsanto Chemical Co. at St. Louis and from the flagstaffs of the plants at Anniston and Monsanto, Tenn., was awarded the company last month for "outstanding performance in the production of naval ordnance material vital to national defense."

MM&R Export Assistant Dies

Miss Naomi Aran, assistant to Fernand Robin, export manager of Magnus, Mabey & Reynard, Inc., New York, died January 12 at New York, shortly after having been stricken aboard ship en route from Puerto Rico. Miss Aran, a native of that country, was returning from a vacation with her family.

Bees Become Pest Problem

International Exterminator Co., Milwaukee, was the subject of several articles which appeared recently in the *Chicago Daily Times* and the *Chi-*



cago *Herald-American* for its work in blitzkriegering a swarm of bees which had driven a Milwaukee couple, Mr. and Mrs. Richard Rapp, out of their home.

Defines Eligibility for P-87

A clarification of which firms are eligible to apply for preference rating order P-87, which allows manufacturers of insecticides, germicides and fungicides to get an A-10 rating, was recently issued by Melvin Goldberg, of the chemicals and allied products branch of the OPM, who administers the order.

"It is planned to confine those eligible under the order to two types:

"(1) Primary producers of chemicals used as agricultural fungicides, insecticides and germicides in connection with the production of food.

"(2) Primary producers of agricultural fungicides, insecticides and germicides used in connection with the production of food.

"Type (1) producer, in order to qualify under this order, must meet the following requirements: (a) Be engaged in the production of

chemicals for use as an agricultural fungicide, insecticide, and germicide; (b) Distribute the processed chemicals directly to the consumer.

"Type (2) producers, in order to qualify under this order, must meet the following requirements: (a) Be engaged to a substantial per cent in the production of agricultural fungicides, insecticides, and germicides either from raw materials or from his supplier; (b) A substantial portion of the fungicides, insecticides, and germicides which he produces must be used in connection with the production of food; and (c) He must chemically process (as distinguished from mixing, blending or physical processing), package and sell the finished products."

A statement, giving a list of agricultural insecticides, fungicides and germicides which are produced, what portion of the manufacturers total business they represent, and the portion of these products that are used in connection with the production of food, should accompany applications for a P-87 rating. A list of customers who act as secondary distributors, or who consume these products, and the amount purchased by them in 1940 and 1941, is also required of applicants.

ATHLETE'S FOOT CONTROL

How effective is sodium thiosulfate for control of athlete's foot? School publications in recent years have been free in their recommendation of this attractively cheap material. A report to the Disinfectant Scientific Committee of the NAIDM, however, just submitted by C. L. Weirich and R. Pokorny, indicates very definite shortcomings. Thiosulfate footbaths, they say, may be potentially infectious and a health hazard. Their report will appear in full in our March issue.

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PCO's Meet at Mass. State

The second Eastern Pest Control Operators' Conference was held at Massachusetts State College, Amherst, Mass., January 12-13-14, with nearly 70 operators in attendance. Dr. Charles P. Alexander, department of entomology and zoology, MSC, was chairman of the conference, assisted by Professor A. I. Bourne, research professor of entomology. Among the feature talks of the meeting were the following: "Some Common Flies and Fleas of Importance to Public Health" by C. T. Brues; "Housefly Control in Relation to Poliomyelitis" by George E. Sanders; "Some Pertinent Facts and Some Important Theories about Contact Insecticides" by W. C. O'Kane; "Some Facts and Theories about Stomach Insecticides" by T. R. Hansberry, and "Organized Rat Control" by George B. Lay. A demonstration of toxicity bio-assay of red squill was presented by C. R. Fellers and A. S. Levine. William O. Buettner, secretary of the National Pest Control Association,

A highly successful meeting at Massachusetts State College is attested to by this smiling group of pest control operators. Attendance numbered over 75.



Photo by Charles Opitz

Dr. Carl R. Fellers of the Massachusetts State College faculty demonstrated the effect of red squill on rats in a feeding test at the recent Eastern P.C.O. conference. He was assisted by Dr. A. S. Levine.

was toastmaster at the annual banquet held January 13, and Hugh P. Baker, president of MSC, was the guest speaker.

Canada Business Good

Business in Canada is good in spite of war-time regulations which tend to restrict imports and the outlook for a continuation of good business there is bright, according to J. L. Hindle, vice-president of Standard

Synthetics, Inc., New York, who recently returned from a trip of several weeks among the consumers of essential oils and aromatics in the Dominion. The entire trip was made via Trans-Canada Air lines and there is as yet no restriction of regular passenger plane flying schedules, according to Mr. Hindle. Standard Synthetics of New York is a subsidiary of Standard Synthetics, Ltd. of London.



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PCO's Meet at Purdue

"The most successful conference so far" was the way the 6th annual Pest Control Operators' Conference at Purdue University, Lafayette, Ind., held January 5-9, was described by those attending it. The attendance, not including staff instructors and their wives, was 119, representing 21 states and Canada. The conference was opened January 5 by Professor J. J. Davis, director of the conference, who was followed by Dean H. J. Reed who welcomed all to the Purdue campus. Practical problems in control of a varied number of insect and animal pests formed a

principal part of the subjects covered during the five-day meeting, while theoretical and technical subjects were also discussed. Practical demonstrations of termite control, grinding and mixing of dry insecticides, and fumigation of grain with HCN, as well as motion pictures on pest control subjects were presented. Among the lectures were: "Disinfectants and Deodorants" by Martin Myers; "The Brown Dog Tick" by Dr. H. E. Whitmire; "Oil Bases and Their Effect on Wallpaper" by Harold E. Jennings and W. R. Husen; "Termite Soil Poison Tests" by R. A. St. George, U. S. bureau of entomology

and plant quarantine; and "Substitutes for Priority Chemicals" by George Hockenyos.

N. Y. PCO's in Joint Meeting

Representatives of more than 40 firms attended a joint meeting of the New York Pest Control Association and the Professional Exterminators Association held at the Hotel Commodore, New York, January 20. A discussion of changing conditions arising out of increased costs of labor, materials, overhead and taxes, formed the principal business of the evening. A committee composed of Justin Simon, General Exterminating Co.; S. S. Rosen, Guarantee Exterminating Co., and Irving Drucker was appointed to study the problem of increased costs. It was unanimously voted that the N.Y.P.C.A. purchase a \$1,000 defense bond and make a contribution of \$50 to the Red Cross. High spot of the evening was reached when Mr. Buettner president of the New York Pest Control Association, was presented with a traveling file leather bag, a gift from the Professional Exterminators Association. His own association presented him with a purse of \$500.

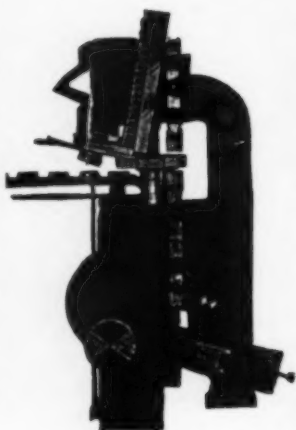
Velsicol Corp. Moves

Velsicol Corp., insecticides, Chicago, has just moved its general offices into new quarters at 120 East Pearson St.

Pest control operators get laboratory training in identification of insects at the annual Purdue conference.



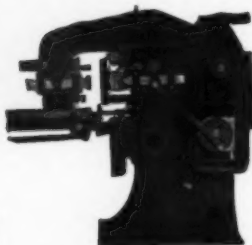
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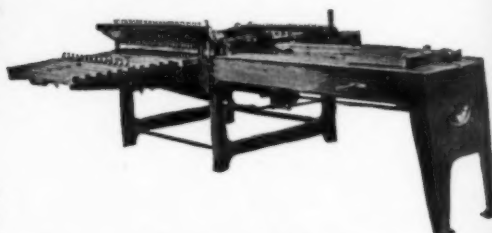
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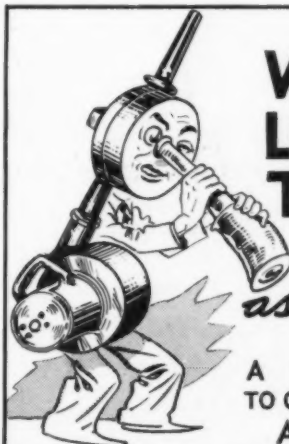
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Tale Ends

GLYCERINE has added further to its stature as an important war material over the past month. Like the heretofore lowly used steel drum, glycerine is now recognized and respected in the high places in Washington, D. C.

Where it used to be the "soap and glycerine industry," we now hear of the "glycerine and soap industry." For the duration, at least, there seems to be little doubt but that the tail will wag the dog.

Two of the largest coconut oil crushing plants in the Philippines, we hear, were bombed and burned before the War in Pacific was 48 hours old.

Diversion of a considerable additional tonnage of pyrethrum to agricultural uses and away from the household insecticide field as a means of making up for an anticipated shortage of rotenone products and metallic insecticides, is said to be planned by the OPM.

Java citronella oil,—in this issue we begin a series of three articles on this oil by the well-known authority, Dr. Ernest Guenther,—articles based on his personal investigations in the Dutch East Indies,—but which were made, however, before the present shooting began. What will be left of the Java citronella industry after a war in the Indies, is naturally hard to say.

And once again, may we suggest that today is *not* the time to miss any issues of *Soap & Sanitary Chemicals*. Keep your subscription paid up. If you receive a subscription renewal bill, send your check promptly before you forget it.

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